

National Regulatory Agency for Telecommunications and Informatics

REPORT

**Regarding Activity of National Regulatory Agency for
Telecommunications and Informatics and Development of
Telecommunications and Informatics Market in 2004**

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1. First Year of Full Market Liberalization

Iurie Tabirta, Director of the National Regulatory Agency for Telecommunications and Informatics

Undoubtedly, 2004 was a special year both for NRATI, as well as for all telecommunications and informatics market players. 2004 was the starting point of market liberalization. The first steps intended to create the foundation for the development of an efficient competitive environment were taken throughout this period.

I am aware of the fact that, after liberalization *de jure* of the fixed international and long-distance telephone market, at least one operator was expected to appear on this market as an alternative to Joint Stock Company (JSC) MOLDTELECOM. There is no such operator so far. It is not because NRATI does not wish this to happen. The real reason lies in the fact that this type of telephony demands huge investments, and the market is comparatively small so not every company can assume the responsibility to make such investments. Moreover, the process of re-balancing tariffs for fixed telephone services has not been finalized yet, and the current tariffs do not allow the recovery of funds invested in the construction of a network of this type. On the other hand, liberalization cannot be carried out overnight. It is a long-lasting process, which envisages the gradual transition from monopoly to competition, based on a legal framework capable to put in place mechanisms for an efficient competition market.

Though the creation of the legal framework for efficient market liberalization is beyond our scope, at the request of the Government of the Republic of Moldova, NRATI developed a new version of the Law on Telecommunications, in accordance with the new European Union Directives. The Draft Law was presented to the country's executive in the autumn of 2004. This law is intended to eliminate the existing blanks and contradictions in the legislation and to establish the instruments necessary to enhance the development of the domestic market, the promotion of fair competition and users' rights of access to communications networks and services. The matter concerns empowering the regulatory authority by law, as in the majority of European countries, with rights related to identification of specific relevant market, determination of competition level, designation of operators with significant market power on these markets and imposing specific obligations on them, implementation of Universal Service, creation and administration of Universal Service Fund, etc.

We strongly support this Draft law, because it offers the legal framework necessary for winning high priority objectives: encourage market entry, actively promote competitiveness by guaranteeing conditions for fair competition and preventing abuse of significant market power, ensure the right of access to Universal Service for all end users throughout the country. In the absence of an efficient legal leverage to influence on the dominant operators, NRATI had to act as mediator in many lengthy negotia-

tions, conducted between new market entrants and operators with dominant position on the market in order to ensure access to their infrastructure and conclude interconnection agreements.

From all issues of 2004 agenda we would like to emphasize three very ample actions NRATI carried out, which are going to enhance, to a great extent, further development of the telecommunications and informatics market. First of all, February 2004 marked the start of the second phase of tariff rebalancing for basic public telecommunications services, provided by JSC MOLDTELECOM. Secondly, the first pilot project for the implementation of several Universal Service elements was launched in district Nisporeni, and finally, the first alternative operators launched public local fixed telephone services. Generally speaking, these actions attained the proposed objectives and the experience gained will allow us to continue them in 2005. This report will offer you more detailed information about the above-mentioned events.

This report also contains information about other work our staff fulfilled during the first year of full telecommunications market liberalization. This work only represents the initial steps in this direction. The activity was not limited only to approving amendments to acts regarding technical and economic market regulation or to drawing up new projects. It also included multiple aspects related the analysis of different market segments, processing hundreds of dossiers from applicants requesting licenses and numbering resources, settlement of several disputes between operators, end users and operators, actions of control and monitoring of service providers' activity.

I would like to emphasize that during almost five years of activity NRATI directed its special efforts to becoming firmly established as a central public authority for telecommunications and informatics market regulation in the country. Much was done to create and consolidate the regulatory framework of this specific market. Valuable experience was gained in interconnection, network interoperability, license issuance and monitoring compliance with license conditions, control on the quality of services provided by the license holders, settlement of disputes between operators and between operators and users. Taking into account the evaluation made by the experts from the International Telecommunications Union (ITU), European Bank for Reconstruction and Development (EBRD), other authorities in the field, NRATI proved to be capable of honoring all obligations assumed.

In my opinion, the years that have passed are only a beginning, in many aspects – a difficult one, a beginning that is to be strengthened by further promotion of the National Strategy for Telecommunications Development, of the National Policy and Strategy for Creation of Infor-

mation Society in the Republic of Moldova, so that the citizens of the country can benefit as soon as possible from a wide range of services at European Union standard level.

2. Activity Objectives and Directions

In 1992, the Republic of Moldova initiated a process of restructuring the telecommunications industry, based upon the strategy of orientation towards Europe and the necessity of creating modern infrastructure meant to ensure the integration of the national telecommunications networks with the European and international ones. In compliance with the recommendations of the international authorities in the field (ITU, CEPT), institutional transformations started, intended to separate the regulatory and operational functions and the post from telecommunications, followed by restructuring of enterprises and development of the legal and regulatory frameworks.

The National Regulatory Agency for Telecommunications and Informatics (NRATI) was created like in the majority of Central and Eastern European countries that carried out legal reforms oriented to the European legal framework (EU Directives of 1997 and 2002) and as a result of specific terms provided by the Agreement on Moldova's Accession to World Trade Organization (WTO) for basic telecommunications services.

According to the Law on Telecommunications, NRATI is a central public authority for regulation of telecommunications and information service market, independent of operators and manufacturers in telecommunications and information, and of the government (except budget approval, consultations about the tariffs for basic public telecommunications services provided by operators with significant market power and appointment of Administrative Board members). NRATI's mission is to ensure the implementation of the National Policy and Strategy in Telecommunications and Informatics, to promote fair competition, to encourage investments and innovations in this field. NRATI manages numbering resources and ensures the integrity of public telecommunications networks. It is within

Though these are complex tasks, I feel certain that the team of experts of NRATI, due to their professionalism, will succeed in fulfilling them.

NRATI's purview to protect the rights and interests of users of telecommunications and informatics networks and services in terms of providers' transparency in relation to final users, tariffs and terms of service provision, personal data processing and creation of conditions meant to ensure the right of access to Universal Service for all citizens of the Republic of Moldova.

NRATI's main attributions are:

- (1) Provision of regulatory documents and technical standards for the telecommunications and informatics field, in compliance with the legislation in force and the strategy of telecommunications development;
- (2) Activity of issuance, suspension, withdrawal, extension of licenses and authorizations in this field;
- (3) Control and counteraction of anti-competition activity;
- (4) Approval of tariffs for public telecommunications and informatics services, in the case when the operator enjoys dominant position on the market of these services;
- (5) Regulation of the top-level domain „.md” management;
- (6) Setting the principles and rules for networks interconnection;
- (7) Ensuring equal conditions of access to telecommunications and informatics networks for all users, as well as, free access to information transmission via public telecommunications and informatics networks, regardless of their type of ownership;
- (8) Monitoring and control of the quality of telecommunications and informatics services and their conformity to the conditions stipulated in licenses, legal provisions, normative acts, etc.;
- (9) Applying sanctions, including fines, in issues within its scope, as provided by law;

2.1 NRATI Main Activities in 2000-2004

During 2000-2004, NRATI laid the foundation of the legal framework meant to ensure exercise of its attribution, as set by the Law on Telecommunications. The main regulations and decisions NRATI issued greatly contributed to strengthening and development of telecommunications and informatics service market, created the prerequisites for the operators' activity in this field, under conditions of competitiveness and non-discrimination, and ensured the protection of users rights and interests.

In accordance with the Policy and Strategy of telecom-

munications development, NRATI designed and applied a series of regulations, referring practically to all functional aspects of telecommunications and informatics service market, as well as to the activity of market players. The approval of these regulations set forth the rules for network interconnection, for fixed and mobile telephone service provision, telegraph and value-added service provision, the provisional procedure for numbering resource allocation, rules for dispute settlement and for calculation and approval of tariffs for services provided by the operators

with significant market power, as well as rules for top-level domain „.md” management.

In 2003, NRATI focused all its effort on preparations for the full liberalization of the telecommunications and informatics service market, due on January 1, 2004. NRATI did everything within its competence, to adjust the legal framework, the normative and regulatory acts to free market conditions. The working group for creating the leverage of transition to a liberalized market of fixed international and long-distance telephone services was consulted regarding these adjustments. The group consisted of NRATI experts and representatives of the majority of operators in telecommunications and informatics. The principles and the program of actions for transition to liberalized market were drawn up and a series of amendments to regulatory acts were approved due to the support of this group. At the same time, the National Numbering Plan and the Tariff Rebalancing Plan for basic public telecommunications services provided by JSC MOLDTELECOM were developed.

In 2004, NRATI directed its regulatory activity to liberalization of telecommunications and informatics market, competition promotion, and creation of conditions necessary for alternative operators to enter the market.

In the same year, at the request of the Government, NRATI draw up a new version of the Law on Telecommunications, in order to harmonize it to the new EU legal framework, to promote fair competition and the rights of electronic communications networks and service users. Focusing on convergence of informational technologies with the telecommunications and radio communications ones,

2.2 Priorities for 2005

NRATI's efforts in 2005 are focused mainly on enhancing fair competition and improving the efficiency of the market liberalization process. These priorities stem out of the Plan of Actions for Implementation of the National Strategy for Creation of Information Society, National Policy and Strategy for Telecommunications and Informatics Development and from the obligations for telecommunications and informatics field, assumed by the Republic of Moldova as part of its international agreements.

According to the Action Plan Republic of Moldova – European Union, our country faces the task to ensure acceleration of progress in policy and regulation of electronic communications, through the following steps:

- Adopting a comprehensive regulatory framework, including licensing, access and interconnection, numbering, cost-oriented tariffs, Universal Service and users' rights, confidentiality and personal data protection.
- Efficient implementation of market liberalization, started on January 1 2004, including maintenance of a fully competitive environment.
- Ensuring independence, increasing the powers and improving the efficiency of NRATI activity through allocation

of additional human and financial resources and strengthening the powers of enforcement.

NRATI proposed to use the phrase “electronic communications” in the above-mentioned new version of the Law, including its title, in accordance with the new EU norms. The project has several essential objectives: to encourage market entry for new operators by simplifying the license issuance procedure, to prevent abuse of significant market power, to promote competition actively by creating conditions for end users to choose high quality services, at reasonable prices, by stimulating market development and diversifying the range of services offered. The Draft comprises two new chapters, conforming to the EU Directives, containing specific clauses, by means of which NRATI will ensure the conditions necessary for the development of the communications market and competition, will protect the end users' interests, especially the interests of low-income categories of users.

The Draft Law also provides for ensuring the right of access to Universal Service (US) of all end users from all the localities of the country, including free of charge, non-stop access to emergency services, obliging the operators providing US to offer high quality services at reasonable prices.

The Administration of NRATI considers the approval and implementation of the new Law on Electronic Communications a priority of special social and economic importance for the Republic of Moldova, given the option of the country's integration in the European Union and the necessity of building an information society, an objective, declared by a Presidential Decree one of the national priorities of the country.

tion of additional human and financial resources and strengthening the powers of enforcement.

The National Program for Implementation of the Action Plan Republic of Moldova – EU sets forth the following tasks:

1. To approve and promote the Law on Electronic Communications (or to modify the Law on Telecommunications) in compliance with the new EU regulatory framework;
2. To rebalance tariffs for basic public services provided by JSC MOLDTELECOM (last phase);
3. To draw up the Regulation on Accounting Separation, within the internal cost accounting system of JSC MOLDTELECOM;
4. To modify the Regulation on Interconnection, including provisions for shared access to the local loop;
5. To develop, approve and make public the following Regulations;
 - On Defining Relevant Markets in Telecommunications and Informatics,
 - On Identifying Operators with Significant Market Power on Telecommunications and Informatics Markets,

6. To draw up the Regulation on Universal Service;
7. To draw up the Regulation on Administration and Management of the National Numbering Plan;

NRATI assumed the task, with the title of priority, to intensify its actions directed to protect end-users' interests, to inform them about their rights in relation to telecommunications and informatics service providers.

We are confident that honoring the above-mentioned high priority tasks will facilitate the new operators' access to the market, will encourage investments and service development.

These factors will undoubtedly contribute to fulfilling the growing demand for these services and give the possibility to select both services and service providers. In order to fulfill its plans, NRATI will take active action in order to make the liberalization process more efficient and to further fulfill its mission of competition protection on the one hand, and that of end-user protection on the other hand. We believe that, as a result of these actions, the Republic of Moldova will make a new step towards the exigencies of the Aquis Communautaire of the European Union.

3. Main Regulatory Acts and Decisions issued by NRATI in 2000-2004

1. Administrative Board Decision no. 11 of 2.03.2001 On Regulating IP-telephony Services and Approving the Tariff for Access Deficit, Official Monitor of the Republic of Moldova (OM) 27-28, 6.03.2001.
2. Administrative Board Decision no. 20 of 4.09.2001 On Examining a Petition Submitted to NRATI by a Group of Operators – Internet Service Providers regarding the Situation on the Data Transport Services Market, O.M. 114-115/273, 30.10.2001.
3. Administrative Board Decision no.17/3 of 07.08.2001 On Approving the Regulation on Dispute Resolution between Operators and between Operators and Users. O.M. 155-157/373, 20.12.2001.
4. Administrative Board Decision no. 18 of 16.08.2001 On Approving the Regulation on Fixed telephone Service Provision (amended by Decisions no.34 of 24.12.03, no.12 of 03.05.04, no.17 of 04.06.04, no.33 of 26.11.04), O. M. 1-3/1, 04.01.2002.
5. Administrative Board Decision no.22 of 30.10.2001 On Approving the Regulation on Telegraph Service Provision, O.M.133-135/321, 08.11.2001.
6. Administrative Board Decision no.02 of 13.03.2002 On Approving the Regulation on Interconnection (amended by Decisions no.21 of 20.10.03 and no.30 of 06.10.04), O.M. 59-61/140 of 02.05.2002.
7. Administrative Board Decision no.04 of 19.04.2002 On Interconnecting Networks of JSC MOLDTELECOM – Dominant Fixed Telephony Service Operator – and Internet Operators, O.M. 59-61/141, 02.05.2002.
8. Administrative Board Decision no.05 of 30.04.2002 On Approving the Regulation on License Issuance in Telecommunications and Informatics (amended by Decisions no.07 of 20.05.03, no.18 of 09.10.03, no.33 of 24.12.03, no.27 of 24.09.04), O.M. 103-105/236, 18.07.2002.
9. Administrative Board Decision no.06 of 31.05.2002 On Approving Tariffs for Telecommunications and Informatics Services Provided by JSC MOLDTELECOM, O.M. 75/194 of 13.06.2002.
10. Administrative Board Decision no.08 of 04.07.2002 On Allocation and Management of Numbering Resources (amended by Decision no.01 of 27.01.2003), O.M. no.103-105/235 of 18.07.2002.
11. Administrative Board Decision no.10 of 09.08.2002 Regarding Compliance of all Operators' Participating in Moldova Telecommunications and Informatics Market with the Requirements of Paragraph 15.2 of the Interconnection Regulation. O.M. 122-123/283 of 29.08.2002.
12. Administrative Board Decision no.12/1 of 26.12.2002 On Approving the Tariff Rebalancing Plan for Public Basic Telecommunications Services Provided by the Operator with Significant Market Power, O.M. 1-2/1, 15.01.2003.
13. Administrative Board Decision no.05/2 of 29.04.2003 On Approving Tariffs for Public Telecommunications services Provided by the Operator with Significant Market Power on the market of this services JSC MOLDTELECOM, O.M. 87-90/124,23.05.2003.
14. Administrative Board Decision no.06 of 30.04.2003 Regarding the Procedure of Numbering Resources Allocation for Premium Rate Services, O.M. 82-83/115, 09.05.2003.
15. Administrative Board Decision no. 03 of 12.02.2004 On Failure to Ensure Quality of Fixed Telephony Services by JSC MOLDTELECOM, O.M. 30-34/73, 20.02.2004.
16. Administrative Board Decision no. 04 of 11.04.2003 On Approving the Plan for New National Numbering Plan Implementation, O.M. 76/104, 22.04.2003.
17. Administrative Board Decision no. 30 din 18.12.2003 On Implementing Phase II of New National Numbering Plan, O.M. 254-261, 25.12.2003.
18. Administrative Board Decision no.32 of 24.12.2003 On Approving Stage II of Tariff Re-balancing for Public Basic Telecommunications Services Provided by the Operator with Significant Market Power on the Market of these Services – JSC MOLDTELECOM, O.M. 13-15/18 of 16.01.2003.
19. Administrative Board Decision no. 23 of 27.10.2003 on Implementing the New National Numbering Plan in the Republic of Moldova (stage I), O.M. 221-222/303, 31.10.2003.
20. Administrative Board Decision no. 36 of 29.12.2003 On Approving the Reference Interconnection Offer of JSC MOLDTELECOM for 2004, O.M. 6-12/16.

21. Administrative Board Decision no. 10 of 5.04.2004 On Establishing the Term for Providing Mutual Access to Numbering Resources by Telecommunications Operators in their Networks, M.O. 56-60 /145, 9.04.2004.
22. Administrative Board Decision no. 20 of 5.07.2004 On Launching the Pilot-Project for Universal Service/Access Implementation in Nisporeni District, O.M. 119-122/259, 23.07.2004.
23. Administrative Board Decision no. 28 of 06.10.2004 On Designating JSC MOLDTELECOM as Operator with Transit Obligations, O.M. no.186-188/371 of 15.10.04.
24. Administrative Board Decision no. 29 of 06.10.2004 On Applying Tariffs in Interconnection Relationship of Operators' Networks and Services with JSC MOLDTELECOM Network and Services, O.M. no.186-188/372 of 15.10.2004.
25. Administrative Board Decision no. 37 din 28.12.2004 On Approving the Reference Interconnection Offer of JSC MOLDTELECOM for 2005, O.M. no.242-245/517 of 31.12.2004.

4. NRATI Regulatory activity

4.1 Regulatory Principles

In its regulatory activity, NRATI takes as a guide clear principles, some of which are stipulated by the legislation in force, others – taken from European and international expertise. Application of these principles plays a decisive role in attaining the objectives set by NRATI. Here are a few of the principles that make the basis for NRATI's activity.

Transparency is ensured through continual information of interested parties – operators and users, by using specific communications instruments: public hearings, public consultations via NRATI Web page, public contacts, press releases, etc. In this respect, every time, by means of public consultation procedures, NRATI intends to make new steps, capable of making a significant impact on the market. The interested parties can submit comments, objections, proposals, thus participating in the preparation of final documents. NRATI replies to the feedback either in writing or orally, during the discussions in NRATI Administrative Board, which are open as a rule.

Equal treatment is ensured through issuing regulatory acts in compliance with law, independent of operators and manufacturers in this field, through NRATI's impartial treatment of all players on telecommunications and informatics market, regardless the type of ownership, their market share, etc.

Active position of NRATI in dealing with phenomena and tendencies in the market evolution, taking regulatory

measures capable of solving the existing problems. NRATI takes its decisions based on the fact that any delay or discrepancy can result in market distortion and a negative impact on the indicators included in the business plans of telecommunications and informatics service providers.

Obligatory character of NRATI decisions stems out of the legal framework provisions. NRATI permanently monitors the fulfillment of these decisions in order to ensure strict compliance with the legislation and regulations in force.

Non-discrimination is a basic principle in the activity of NRATI. The regulatory decisions approved by NRATI are technologically neutral, do not affect competition and promote innovations and development of the most efficient technologies. There is no discrimination in the treatment of undertakings from NRATI's part, regardless of the type of ownership, volume of services they provide, etc.

Long-term stability of regulations makes it possible for operators to draw up their business plans to make the necessary investments with minimum of risks. Current NRATI decisions are predictable for all market players as they are approved in compliance with the legislation, policy and strategy in the development of this field.

Priority of end users – all regulatory actions taken by NRATI are oriented pre-eminently towards the benefit of end-users, which means protection of their rights and meeting their demands.

4.1.1 Technical Regulation

Throughout the reporting period, NRATI dealt with different aspects related to technical regulation of the telecommunications and informatics service market. One of them concerns approving decisions on allocation of numbering resources and efficiency of their use; shared use of facilities and setting conditions for fulfilling this obligation; setting technical or operational conditions to be fulfilled in case obligations on access or interconnection are imposed; establishing the minimum requirements personal data and

privacy protection; determining the technical conditions necessary for implementation of new services, etc.

In 2005, after the new version of the Law on Telecommunications is approved, NRATI will establish the conditions, according to which the Universal Service Provider will meet the end users' requests for access and connection to public telephone networks at a fixed location, as well as access to public fixed telephone services at a fixed location; will impose obligations on the Universal Service

Provider regarding access to public payphones; will impose on public telephone networks providers and public telephone service providers the minimum requirements to ensure access to public telephone networks at a fixed location and possibility to make emergency calls. In this matter, NRATI set as an objective to establish technical norms, quality indicators specific for telecommunications and informatics field, quality parameters for providing services included in Universal Service package, methods to evaluate compliance with this parameters, as well as to establish contents, form and manner of transmission and publica-

4.1.2 Economic Regulation

Economic regulation of the market consists, in its most part, in elaboration of normative acts for wholesale and retail markets regulation. Throughout 2000 – 2003 NRATI carried out its regulatory activity on these markets to the extent competition was admitted by the legislation in force. With the view of preparing the ground for a full liberalization of the telecommunications service market, NRATI elaborated the *Regulation on Tariffs for Public Telecommunications and Informatics Services*, approved by the Government in 2002. Establishing balanced tariffs for the services provided by the incumbent aims at ensuring, on the one hand, its financial stability under competition conditions, and, on the other hand, at protecting the market against price squeeze or dumping from the part of the dominant operator. As a result of consultations with the Government in December 2002, NRATI approved the tariff re-balancing plan for basic public telecommunications services provided JSC MOLDTELECOM. This plan comprises 4 stages, as a result of which the tariffs for the services provided by JSC MOLDTELECOM are to be brought in balance with their costs. Before 1.01.2005 the first two stages of tariff rebalancing had been implemented, one starting on February 1, 2003 and the other – on February 1, 2004. This regulatory action allowed the incumbent to set up a more viable financial base and to reduce its threatening dependence on international telephony services. Finalization of this process will eliminate cross-subsidization of services.

Though in 2004 NRATI approved a series of decisions, aimed at facilitating the access of new operators to the market, the existing situation requires additional actions to ensure favorable conditions for a fair and efficient competition.

4.2 Interconnection and access

4.2.1 Regulation of Interconnection

Taking guidance from the provisions of the Law on Telecommunications, NRATI developed and approved the Regulation on Interconnection in March 2002. The regulation is the basic instrument aimed at regulating interconnection relations between operators and relations of mutual access to associated infrastructure. Another Regulation meant to ensure successful interconnection relations between operators and dispute resolution is the Regulation on Dispute Reso-

tion of information regarding compliance with quality parameters, to decide upon obligations for providers of leased lines with significant market powers to apply similar conditions in similar situations, as well as to provide leased lines to third parties under the same terms and conditions and the same quality as applied for their own services.

These regulations are intended to ensure, on the one hand, technical conditions for the access of new operator to the market, and on the other hand, access of end users to the services requested.

Thus, the issue of accounting separation within the internal accounting system of operators with significant market power will be one of the priorities for 2005. It is considered an instrument of ensuring transparency of internal transfers, carried out by these operators and protecting the market against price squeezing actions on wholesale and retail competitive markets. Due importance will also be attributed to unbundling of network elements and to the calculation of economic costs for services of access to essential facilities and interconnection with operators with significant market power, in order to prevent the market from onerous subsidization between operators.

Another regulatory measure for the wholesale market, planned for 2005, will be setting cost-based prices for wholesale services, where they are provided by an operator with significant market power. To calculate these prices, operators must use the Long Run Incremental Costs (LRIC) calculation method, taking into account current or planned investments.

Regulation of the retail market aims at another major objective: on the one hand, to ensure efficient margins between the prices of wholesale and retail services, provided by an operator with significant market power, in order to prevent a price squeeze from the competitors' part, and, on the other hand, to ensure retail service users, through forestalling situations of abuse, where a major operator has the power to influence in a decisive manner the conditions of activity on these markets. To establish the rules of determining tariffs for retail services, where market instruments are not efficient, is also one of the main regulatory steps of economic character.

lution between Operators and between Operators and Users by the National Regulatory Agency for Telecommunications and Informatics, approved in December 2001.

Also in 2001, NRATI draw up a mechanism to regulate international IP-telephony services, in order to balance out the opportunities of fixed telephone network subscribers and the obligations of competitive companies on this market to subsidize the local fixed network. As a result, the

terms *access deficit* of local network and *access deficit tariff* were introduced. The term *access deficit* is defined as the revenue deficit produced at local service provision at tariffs under-cost. The *Access Deficit Tariff* is a payment, which every competitive operator providing international services contributes to subsidization of the access deficit. As the market has evolved, the traffic has grown and the tariff re-balancing process has advanced, the Access Deficit Tariff has undergone a continuous decrease, coming to 20 % of its 2001 value at the end of 2004.

As the market was fully liberalized, there have been problems related to interconnection of new entrants to the incumbent's network and cell mobile telephony operators. In view of solving this issue, NRATI approved, in October 2004, two decisions of major importance for the market: on Designation of JSC MOLDTELECOM as Operator with Transit Obligations and on Applying Tariffs for Interconnection of Operators' Networks and Services to the Networks and Services of JSC MOLDTELECOM. These Decisions were approved in order to facilitate the access of new local fixed operators to the market and to make sure they benefit from the same interconnection conditions as the rest of the existing operators.

4.2.2 Regulation of Interconnection with Public Fixed Telephony Network of JSC MOLDTELECOM

In order to promote and maintain efficient competition, NRATI imposed a number of obligations related to the interconnection of the public fixed telephony network, operated by JSC MOLDTELECOM with the telecommunications networks installed, operated or offered by alternative operators, thus establishing the legal system for voice, data (Internet Dial-up), fax and image services.

Thus, JSC MOLDTELECOM has the obligation to permit interconnection to all locations of its network, where it is feasible from the technical point of view, to all local and transit switches, with interconnection purposes, at local or national level.

NRATI imposed on JSC MOLDTELECOM obligations of transparency, non-discrimination, as well as the obligation to put at the disposal of any operator, requesting interconnection, all services and information necessary to establish interconnection, including collocation services and other technical resources, necessary for installation, connection, functioning and maintenance of collocated equipment.

These obligations are set forth in the Reference Interconnection Offer (RIO), which is meant to ensure transparency in the conditions for interconnection and access to the network and infrastructure of JSC MOLDTELECOM. It represents a minimum set of obligations assumed by JSC MOLDTELECOM in order to establish interconnection with any other operator.

In 2003, NRATI made modifications to the Regulation on Interconnection, through which it imposed on the dominant operators on telecommunications and informatics market to elaborate RIOs, to submit them for approval to

NRATI's obligatory decision establishing the general conditions of interconnection between the new fixed telephony operator JSC RISCO and the cell mobile telephony operator JSC VOXTEL followed the same objective. As the interconnection negotiations between the two operators was delayed and reached a deadlock, NRATI had to make the conclusion of an interconnection agreement obligatory, with compliance to some general conditions.

In 2004, NRATI paid a special attention to the issues connected with the access of alternative operators to the incumbents' associated infrastructure, in order to use it for production purposes. The following are some of the issues, requiring the intervention of NRATI: unbundled access to the local loop, collocation of equipment of operators in the premises JSC MOLDTELECOM, shared use of ducts and masts.

In all its decisions, NRATI complied with the Regulation on Interconnection and the Agreement on Accession of the Republic Moldova to WTO, which stipulated that a major operator must offer access to essential facilities under terms and at prices and quality not less favorable than those offered to own retail services or to other operators.

NRATI and subsequently to make it public. The modifications also included approval, by the end of 2003, of RIOs for the following year, by establishing a consultation mechanism with operators and other interested parties.

This document of major importance for the wholesale service market – Reference Interconnection Offer of the incumbent JSC MOLDTELECOM – was approved by NRATI after it was discussed in the Working Group for Preparing the Market for Full Liberalization. The Offer provides for the interconnection point available and the technical and commercial terms and conditions for interconnection, offered by JSC MOLDTELECOM to all operators of telecommunications and informatics networks and services from the Republic of Moldova, licensed accordingly, in compliance with the principles established in the Regulation on Interconnection. After its approval, the Offer was exposed on the WEB page of JSC MOLDTELECOM.

One of the main problems the fully liberalized market faced was connected with reduced tariffs for local fixed telephone services, provided by the incumbent – JSC MOLDTELECOM, and established under provision costs. The situation when the incumbent's tariffs were unbalanced placed it in a more favorable commercial situation in relation to its competitors. That is why NRATI decided to offer new fixed telephony operators equal interconnection conditions, in order to enable them to handle competition with the incumbent. The interconnection conditions offered by JSC MOLDTELECOM made the costs, which alternative operators incurred in relation to local and long-distance traffic, too high to justify the investments made in local networks.

In order to reduce the pressure of unbalanced tariffs on competition, NRATI introduced the method *Sender Keeps All* for the local traffic of the interconnected fixed telephony operators. According to this method, the local telephony operators exchange traffic without mutual settlements. Avoiding costs related to local interconnection allows alternative fixed telephony operators to offer competitive tariff plans.

As for long-distance traffic, it also created a price squeeze situation for competitors. Thus, the tariffs for long-distance services provided to end-users were by 14,3 % lower, than the termination rate in the network of JSC MOLDTELECOM. Such a situation involves higher costs incurred by alternative operators than the ones incurred by the incumbent, which made the formers' services

4.2.3 Regulation of Indirect Interconnection

To ensure efficient functioning of the telecommunications market, in particular at its initial liberalization stage, it is extremely important that an operator act as transit operator for all the rest of market participants. The necessity is caused by different geographical positions of many operators and by small market segments they share, which fact prevents them from establishing direct interconnection.

Where an operator assumes transit operator responsibilities, there occurs a phenomenon, called „hubbing” – collection of traffic from a number of operators and directing it to different networks. As a result of hubbing, small operators placed in different geographical areas, have the possibility to reciprocally carry traffic, simultaneously avoiding extremely high costs that would be incurred for direct interconnection.

On examining the situation in this respect and, taking into consideration the market position of JSC MOLDTELECOM, NRATI decided to designate this com-

4.3 Licensing System

In compliance with the provisions of the Law on Telecommunications, on Informatics, on Licensing Certain Types of Activity, all activities related to service and network provision in telecommunications and informatics are subject to licensing. The legal framework stipulates that any legal entity from the Republic of Moldova can become service and network provider in this field, by obtaining a license issued by NRATI. The Regulation on Licensing in Telecommunications and Informatics, approved by NRATI based on the above-mentioned laws, contains the list of types of activity and services in telecommunications and informatics that are subject to licensing. It provides for manner, procedure, terms and conditions for license issuance, modification, updating, suspension and withdrawal of licenses, fees for original license issuance and for license copies and duplicates issuance.

uncompetitive. In order to redress the situation, NRATI ruled that fixed telephony alternative operator should be provided access to the long-distance network of JSC MOLDTELECOM at prices reduced by at least 15% – in peak hours and by 25% – in off-peak hours, of the tariff the incumbent established for long-distance telephony services for its own users. The correlation of prices for the use of the incumbent's network and for the incumbent's final tariffs made it possible to avoid the situation, when the disproportion between final tariffs and termination rates cause competition distortion.

In accordance with the scheme above, NRATI ruled transit of access traffic to Internet through Dial-Up. Thus, JSC MOLDTELECOM gives fixed telephony alternative operators a 25% reduction of the tariff for using its network.

pany as operator with transit obligations. Such a decision was caused by the fact that interconnection agreements between the main market players contained uncompetitive clauses, which created circumstances to restrict competition on the market of national transit and termination in national networks. Additionally, some of the provisions of the Regulation on Interconnection (obligatory nature of signing an interconnection agreement between two operators) did not meet the requirements of a liberalized market and could hinder market development. In view of favoring market development, the NRATI Administrative Board, additionally to the Decision on designating this company as operator with transit obligations, approved the Decision on Regulating Indirect Interconnection. Through this decision, NRATI made the necessary modification to the Regulation on Interconnection, while the operators were obliged to eliminate from their interconnection agreements all uncompetitive clauses related to interconnection.

NRATI issues two types of licenses:

- a) Licenses for a type of activity – are issued for a single type of activity, which can include more than one service in telecommunications and informatics;
- b) Technical licenses – legalize construction, maintenance, as well as creation of radio and television (air and cable) stations and networks, according to the established parameters, and are issued for the validity period of the broadcasting licenses.

The licenses issued by NRATI are classified into two categories:

- a) Individual licenses, providing for the use of limited resources (radio frequencies, numbering resources etc.) or represent a special state interest regarding establishing license conditions. These licenses are issued for fixed long-distance and international services, for cell mobile

- telephony services for a period not exceeding 15 years.
- b) General licenses that do not provide for either limited resources utilization or represent a special state interest regarding establishing license conditions. They are issued for fixed telephony service provision and informatics service provision, for a 5-year period.

The License Issuance Commission of NRATI approves Decisions on license issuance or refuses to issue a license in no longer than 15 working days for general licenses and 30 working days for individual licenses, from the date the requestor submitted the full package of documents, nec-

essary for license issuance. Licenses are issued by the Commission through direct committing or through a tender and are not transmittable. If the license is issued on a tender basis, the period of tender proceedings will not be included into the license issuance term.

The Licensing Commission is instituted by order of NRATI Director and comprises 7 members, including the Chairman of the Commission.

55 Licensing Commission sessions were held in 2004. The average timeframe for requests examination and reply was 4.7 working days.

4.3.1 Licenses Issued in 2000 – 2004

Throughout the period 2000-2004, NRATI issued 803* licenses, authorizing 646 companies to provide telecom-

munications and informatics services, including, in 2004, – 258* licenses for 245 companies.

Table 4.1 The Table below gives detailed information about the licenses issued

	FIELD OF ACTIVITY / SERVICE	2000-2004	2004
1.	TELECOMMUNICATIONS	158*	44*
1.1	Fixed local telephony service provision	22	9
1.2	Value-added services	27	17
1.3	Services of installation, construction, and assembly of telecommunications equipment and networks	103	30
1.4	Technical servicing (maintenance) of telecommunications equipment and networks	51	23
1.5	Re-sale of public telephony services	21	10
2.	INFORMATICS	482*	147*
2.1	Provision of data transport services via terrestrial networks and/or via VSAT	121	43
2.2	Installation, construction, and assembly of data transport networks	121	39
2.3	Drafting of public data-transport networks projects	68	42
2.5	IP- telephony services	82	25
2.6	Technical servicing (maintenance) of public data transport networks	66	31
2.7	Design, maintenance and implementation of programs, equipment and informatics systems	136	60
2.8	Informatics services in public places	265	88
2.9	Design, elaboration and implementation of informatics systems of state interest, and services to ensure their functionality	52	32
2.10	Creation of informatics resources services of state interest, and their use (creation of databases, their operation and information service provision)	48	27
2.11	Resale of data transport services via terrestrial or VSAT networks	51	33
	TELEVISION AND RADIO		
3.	Construction, maintenance, operation, and creation of air television stations	36	13
4.	Construction, maintenance, operation, and creation of cable television stations	90	41
5.	Construction, maintenance, operation, and creation of air radio stations	36	13
6.	Construction, maintenance, operation, and creation of cable radio stations	1	0

* A License can authorize provision of several services

4.4 Administration of Numbering Resources

4.4.1 Objectives and Regulations

One of NRATI's basic functions is to elaborate and manage the National Numbering Plan (NNP), to allocate and administrate numbering resources efficiently. In 2004, NRATI's main objectives in its policy of numbering resource administration were the following: to implement stage II of the new NNP and to provide the liberalized market with numbering resources sufficient for its development.

NRATI carries out this activity on basis of the Provisional Procedure regarding Numbering Resources Allocation, approved by the Administrative Board in July 2002. This act regulates the activity of numbering resources allocation, establishes the manner and procedure in which NRATI can allocate and withdraw numbering resources and has its purpose to ensure efficient management of numbering resources and allocation principles: proportionality, transparency and non-discriminatory access to these resources.

In the conditions of a newly liberalized market, where more than one operator provide the same type of services, NRATI implemented the mechanism of carrier selection by allocating access codes. During the same period, NRATI Administrative Board issued a series of decisions regarding numbering resources, including the ones providing for allocation of number blocks for information services, of access codes for long-distance and international services via operator, tech-

nological codes for network testing. NRATI also determined the numbering resources for the fixed telephony networks of new market entrants. The number block "1600 – 1640" was set for implementing access to IP-telephony via short codes. A deadline was established for using 6-digit numbers from range "2" of the NNP for access to IP-telephony services, while the service of access to Internet (Dial-Up) was implemented by means of using 821 XXXXX number block.

In view of ensuring interoperability of telecommunications networks, NRATI established the term in which the operators must ensure mutual access to numbering resources in the networks they operate. NRATI also set the principles for National and International Signaling Point Codes regulation.

For 2005, in order to ensure equal conditions for operators, to diversify the services they offer to users and to guarantee efficient management of numbering resources, NRATI set as priorities to ensure the implementation of access to range "1" of numbers on the entire territory of the Republic of Moldova and to draw up the Regulation on National Numbering Plan Administration and Management. This document will comprise the procedure and the practice of numbering resources administration, applied recently by NRATI, as well as the recommendations of international authorities in this field that Moldova joined.

4.4.2 National Numbering Plan

The new National Numbering Plan, approved by order of the Ministry of Transport and Communications (MTC) on 08.04.2003, entered in force on the date it was published in the Official Monitor of the Republic of Moldova no.76/104 of 22.04.2003. NRATI draw up the new NNP in compliance with the Recommendations of the International Telecommunications Union (ITU) and European Conference of Postal and Telecommunications (CEPT) related to numbering.

Initially, in 2000, MTC developed a plan based on the administrative territorial structure of the country in those days, which included the structural units "judets" and was meant to change the plan inherited from the ex-USSR. As a result of approval of Law on Administrative Territorial Structure of the Republic of Moldova and Transition to Districts (raions) No.764, 27.12.2001, a working group created on 23.08.2002, comprising representatives of MTC, NRATI, JSC MOLDTELECOM, VOXTEL, MOLDCELL and other operators, proceeded with the modification of the plan approved by MTC

The draft modification of the new NNP was based on the following principles:

- Flexibility of NNP in relation to administrative territorial division of the Republic of Moldova by means of determining the numbering zones;

- Non-discriminatory access to numbering resources for all telecommunications networks and services operators;
- Reservation of numbering resources for development and extension of the existing services and for new ones;
- Minimization of NNP implementation costs.

The new PNN, which was subject to examination by ITU experts, provides for a reserve of numbering resources sufficient for a long-term development of telecommunications services and networks. It allows formation of a hundred million combinations on numbers, which means that NRATI will be able to allocate one hundred million 8-digit telephone numbers. As a part of 5-, 4- and 3-digit combinations are reserved for special service provision, fifty million numbers remain available, out of which, at the beginning of 2005, telecommunications and informatics service providers used about two million numbers.

Immediately after approving the new NNP, NRATI formed two working groups, which ensured elaboration and implementation of technical programs and publicity programs for NNP implementation. The works to implement NNP were launched through NRATI Administrative Board Decision no.10 of 17.06.2003. After the first stage, implemented on October 31, 2003, the format of national significant num-

ber was extended to 8 digits, national destination codes for the majority of localities in the Republic of Moldova were modified and the numbering for access to mobile networks were transferred to “6” and “7” number ranges. After the

second stage, launched on January 31, 2004, NRATI modified the national destination codes for towns Ceadir – Lunga, Vulcanesti and Taraclia and implemented access to numbering resources from range “1” in Chisinau municipality.

4.4.3 Allocation of numbering Resources

In 2004 NRATI allocated the numbering resources requested by operators in compliance with the Provisional Procedure regarding Numbering Resources Allocation. 90 applications were filed with NRATI and examined during 24 sessions of the Licensing (Numbering) Commission. In the timeframe March – June 2004 a database of numbering resources was implemented in the informational system “Access”, which allows a more efficient and prompt administration of numbering resources.

Throughout the reporting period numbering resources were allocated for the majority of telecommunications and informatics services and networks. There was high demand for number blocks to be used in fixed and mobile telephony networks, access codes to service and networks, short numbers for non-communications services, numbers for Freephone and Premium rate services, etc.

Table 4.2 Numbering Resources allocated in 2003 – 2004

Nr	Telecommunications networks and services	Number block	Numbers and codes allocated in 2003	Numbers and codes allocated in 2004
1	Access codes to telecommunications operators	1010 - 1049	-	1
2	Access codes to information services of operators	118X(X)	-	1
3	Access codes for IP-telephony services	1600 - 1039	18	17
4	Access codes to long-distance/international services	1680 - 1699	-	2
5	Access codes to data transport operators	1900 - 1949	-	14
6	Technological codes for network testing	1800 - 1899	-	26
7	Short numbers for services	1400 - 1499	-	29
8	Fixed telephony networks			
	JSC MOLDTELECOM	2XXXXXXX	82554	78965
	State enterprise Railway Moldova”	2XXXXXXX	-	5100
	Alternative fixed telephony operators	2XXXXXXX	-	4000
9	GSM mobile telephone networks			
	JSC VOXTEL	69X XXXXX	200 000	200 000
	JSC MOLDCELL	79X XXXXX	200 000	300 000
10	Freephone service	800 XXXXX	9	15
11	Numbers for access to Internet services	821 XXXXX	-	20
12	Premium rate service	900 XXXXX	9	8

5. Dispute Resolution

5.1. Disputes between operators. Disputes between users and operators

According to art.9 letter. j) of the Law on Telecommunications, NRATI settles disputes between operators and between operators and users. On order to fulfill this obligation, NRATI draw up and approved the Regulation on Dispute Resolution between Operators, and between Operators and Users. According to this act, NRATI examines disputes between license holders and users, disputes that they were not able to settle independently. That is

why the complainant is required to present proofs of preliminary attempts to settle the dispute.

Throughout 2004, 250 complaints and petitions for dispute resolution were filed with NRATI. The majority refer to non-compliance with license conditions, service provision contracts by licenses holders, bills containing erroneous calculations, refusal to issue itemized bills for telephone calls, including abusive clauses in the service provision con-

tracts, unfounded refusal of the license holder to ensure unbundled access of other operators to his network. A large majority of these complaints were resolved through administrative obligatory acts, issued by the divisions responsible for dispute resolution. NRATI Administrative Board examine disputes that require public hearings, where the parties involved can offer explanations, present proofs, propose possible solutions for dispute settlement. In case the complainant's claims are ascertained as well founded, NRATI takes decisions on restoration of the complainant's legitimate rights and interests and obliges the respondent

5.2 User Protection

In accord with art. 13 of the Law on Telecommunications and art. 23 of the Law Consumer Protection, NRATI is empowered to protect consumers (for the purpose of the Law on Telecommunications, the term "consumer" is defined as the final user of telecommunications and informatics services). These legal acts stipulate that, for the purpose of consumer protection, NRATI elaborates regulations regarding consumer interests protection, examines their petitions, and decides upon disputes between consumers and license holders.

Based on these legal attributions, NRATI Administrative Board adopted two decisions and four regulations that contain norms for ensuring the protection of telecommunications and informatics services users. For example, the *Regulation on Fixed Telephony Service Provision* was drawn up in order to regulate the relations between operators and users in establishing service provision, service provision itself and cancellation of contracts.

6. Monitoring and Control Activity

NRATI's monitoring and control activity is aimed at improving and promoting fair competition between market players on the telecommunications and informatics market, as well as protecting the users' rights and interests, under transparent, fair and impartial conditions.

The monitoring activity is conducted permanently, for the purpose of executing the functions, objectives and tasks NRATI is assigned with, according to the legislation in force. The activity is ensured through continual or periodic analysis of certain information and evidence that characterize, at a certain extent of probability, market players' deviations from the provisions of legislation and normative acts in force, without having to intervene in their activity. In the case such deviations are ascertained, NRATI can subject the respective economic entity to a control procedure. At the same time, the monitoring activity is primarily aimed at keeping control on implementation of policies and regulations in force, at verifying compliance with license conditions, at preventing administrative contraventions by license

to take action in order to execute the decisions approved. In 2004 NRATI adopted two obligatory decisions, compelling from the license holders involved to remove the impediment for signing interconnection agreements.

According to the procedure of administrative contentious, NRATI Administrative Board Decisions referring to dispute resolutions can be contested in the competent court. Not a single decision of this type was contested in the court, which fact speaks in favor of the legitimacy and objectivity of these decisions.

The Regulation on GSM Mobile Telephony Service Provision follows the same aim – protection of the rights and interests of the cell mobile telephony service users and mobile operators' compliance with technical standards and service provision conditions

In 2004, upon several requests from users, NRATI operated modifications to the above-mentioned regulations, which set forth the contents of the itemized bill and the operator's obligation to issue itemized bills free of charge, at the user's request once a month.

User protection is also ensured through their own notifications, as a result of monitoring the license holders' work with customers. In 2004 NRATI received 35 notifications referring to the protection of users' legitimate interests. As a result of the measures taken by NRATI, 15 users legitimate rights were restored. On NRATI's initiative 2 cases were filed to court and the respondent operators had to restore the economic rights of six users, before the court took a decision on dispute resolution.

holders, as well as drawing up reports, studies, and analyses meant to evaluate the necessity and timeliness of new regulations to meet current and future requirements. The control activity is ensured through measures aimed at verifying compliance with the legislation, normative acts and regulations in force, compliance with license conditions, as well as actions directed to evaluate service quality and manner, in which license holders in telecommunications and informatics meet the users' demands. The Monitoring and Control Division is assigned with this task and it fulfills it primarily on basis of the Annual License Holders Control Plan. Monitoring and Control Division specialists, who are authorized by NRATI Director through special mandates, conduct all control actions.

Taking into account the fact that non-compliance with the provisions of the legislation, normative acts, standards and regulations in force in telecommunications and informatics can affect both users' interests and national security, the monitoring and control activity plays an im-

portant role in the exercise of NRATI attributions.

Throughout 2004 the specialists of the Monitoring and Control Division conducted 272 controls of license holders, out of which 239 – planned, 6 – unforeseen and 27 – controls focused on verifying the conditions of service provision and of work with customers, in order to evaluate the level of preparation for telecommunications and informatics service provision and to examine the possibility of issuing decisions on launching the respective services.

The planned controls bore a general character and were carried out according to the Annual Control Plan for 2004. The results of every control process were described in the reports, drawn up on the site and signed by both parties. They contain actual findings according to the subject of the control process and, where violations were detected, remedies were recommended to redress the situation.

Unforeseen controls were conducted based on complaints and notifications filed with NRATI in order to examine the situations described by petitioners and to take all the necessary steps, according to NRATI's legal attributions.

It was ascertained, as a result of control procedures that 36 out of 71 license holders for fixed telephony service provision, subject to control according to the Annual Control Plan, suspended their activity and 21 – out of the total of 125 license holders for informatics service provi-

sion did the same. Out of 93 companies, where breaches were detected and remedies were recommended, 63 companies conformed to the recommendations within the established timeframes, 26 companies remedied the breaches exceeding the deadlines and 4 companies were administratively sanctioned for non-compliance with license conditions.

The following types of breaches were the most frequent: unauthorized use of frequencies, use of uncertified and unmarked equipment; non-compliance with the timeframes established for filing statistical reports to NRATI or failure to file them; exceeding the timeframes for technical license updating and renewal; non-compliance with parameters and data set forth in the technical projects during operation of radio and television stations and networks; launching services before a decision on service launching is issued; launching broadcasting and technical operation of networks and stations before authorization decisions are issued; failure to file interconnection agreements with NRATI; exceeding the deadline paying off the regulatory fee.

In comparison with 2003, when 158 controls were carried out, in 2004 this number almost doubled, reaching 272. This situation can be explained by the considerable growth of the number of license holders, as well as the number of complaints addressed to NRATI from end users.

7. NRATI – Structure and Responsibilities

NRATI carries out its activity in compliance with the provisions of art. 11(1) and (2) of the Law on Telecommunications and Chapter 5 of the Regulation of the National Regulatory Agency for Telecommunications and Informatics, approved by Decree of the Government of the Republic of Moldova no. 843 of August 17, 2000. The supreme body of NRATI is the Administrative Board that approves the organizational structure and the staff necessary to enable NRATI to fulfill its attributions as established by law. NRATI Director, who is also chairman of the Administrative Board, manages the activity of NRATI. Two Deputy Directors are also Administrative Board Members. Administrative Board Members are appointed through Government Decree.

The Administrative Board, as a corporate body, is responsible for general organization of NRATI's activity and for its exercise of attributions, established by law.

NRATI is divided in four Divisions:

- The *Regulation and Licensing Division* is responsible for drawing up regulatory acts, license issuance, management and allocation of numbering resources, other attributions as set by the internal NRATI regulation.
- The *Market Economic Regulation Division* is responsible for the elaboration of pricing methodology, for evaluation of tariff correctness, identifying relevant markets and designation of operators with significant market power, determination of non-discriminatory principles of the relationships between operators, competition

promotion and other attributions.

- The *Monitoring and Control Division* ensures control over compliance of license holders with license conditions, technical conditions, manner and correctness of service provision. In case breaches of license conditions are detected, it draws up reports ascertaining the breaches and makes proposals regarding measures for their remedy, including proposals on user protection.
- The *Legal and Administrative Division* is responsible for ensuring the legitimacy of all acts issued by NRATI, for dispute resolution between operators and between operators and users, user protection, representation of NRATI's interests in court, organization of the internal activity of NRATI and other responsibilities as assigned in accordance with the internal regulation.
- The *Commission on License Issuance* within NRATI is responsible for solving the issues connected with license issuance withdrawal, suspension or cancellation.

The Technical and Scientific Council acts under Administrative Board guidelines. It is a body based on public principle, comprising Administrative Board Members, NRATI specialists, representatives of operators and scientific institutions. The Council, as a consultative body, elaborates technical and scientific recommendations related to the strategy of telecommunications and informatics development, to technical standards and norms in this field.

7.1 NRATI Finance Sources

Financing current and capital expenses of NRATI is carried out, according to art.12 paragraph (1) of the Law on Telecommunications out of the following sources:

- Regulation contributions annually levied by NRATI from license holders;
- Fees for authorisations, licenses and license technical conditions issuance;
- Fees for numbering resources;
- Other income foreseen by the legislation in force.

7.2 Regulation Contributions and Method of Calculation

According to the provisions of art.12 paragraph.(3) of the Law on Telecommunications, NRATI establishes the sums of regulation contributions for the following year at a level sufficient for covering its expenses. The contributions are calculated in percent and are determined on basis of an estimation of the volume of telecommunications and informatics services provided by license holders. In compliance with art. 12 paragraph (4) of the Law on Telecommunications, the regulation contribution can amount to 0,3% of the volume of revenue generated by telecommunications and informatics service provision.

In order to ensure compliance with the above-mentioned provisions NRATI draw up the *Instruction Regarding Manner of Calculation and Payment of Regulation Contributions by License Holders in Telecommunications and Informatics*, which is placed on NRATI Web Page. The Regulation contributions are paid quarterly, before the 15th of the month following the quarter. Annually, by November 1st, NRATI publishes in the Official Monitor of the Republic of Moldova the percentage of regulation contributions to be paid the following year.

In 2000-2002, the percent of the regulation contribution, approved by NRATI, was equal to 0.1%, and in 2003-2004 – 0,15%. For 2005, NRATI approved the regulation contribution of 0,2%.

The amount of the regulation contribution that the license holder in telecommunications and informatics pays, is calculated according to the formula:

$$\text{Spr} = V * \text{Pr}$$

7.3 Fees for Numbering Resources

Pursuant to art. 9(1) p. g) of the Law on Telecommunications, NRATI manages and allocates the numbering resources requested by operators for fees. As a result of the analysis of the domestic telecommunications and informatics service market and the international practice in numbering resource management, NRATI approved, through an Administrative Board Decision, the fees for numbering resources.

NRATI can also accept donations and grants, in accord with the law. The sums levied from the above-mentioned sources are integrally kept as own income, on permanent basis, at NRATI's disposal and are used in accordance with the provisions of the budget, approved in compliance with the law.

NRATI Budget is approved annually by the Government of the Republic of Moldova and is published in the central press.

Where:

Spr – calculated sum of the regulation contribution that is to be paid by the license holder;

V – volume of the effective revenues generated from Telecommunications and Informatics service provision for the calculation period;

Pr – amount of regulation contribution established by NRATI for the calculation period in accordance with the stipulations of art. 12 of the Telecommunications Law.

Through the attributions granted by law, NRATI has the exclusive right to use the resources from its account. The funds unused during the current financial period are transferred to the budget of the following year. If a deficit of funds is created during the current financial period, NRATI has the right to cover it from the budget of the following year, correcting the regulation contributions accordingly.

In order to cover current expenses that cannot be covered from levied regulation contributions, NRATI has the right to contract bank loans at reasonable rates of interest. NRATI reimburses the loans from regulation contributions levied subsequently.

NRATI exercises control over integral and timely payment of the regulation contribution, as well as forced collection of regulation contributions and annulment of disputed debts according to the legislation in force. For non-compliance with the legislation in force and regulatory acts, license holders in telecommunications and informatics are liable in accordance with the Code on Administrative Contraventions.

Financial resources collected as a result of numbering resource allocation are used for covering current expenses that cannot be covered from regulation contributions. NRATI's experience shows that collecting fees for numbering resources allocated to license holders in telecommunications and informatics and service providers contribute to a more efficient use and management of the National Numbering Plan.

Table 7.1 Fees for numbering resources

No.	Type of allocation	Numbering Resources	Payment period	Payment for administration (lei /number)
1. NUMBERS				
1.1.	Short numbers for services in district centers (raions)	9X and 9XX	Annually	5 200,00
1.2.	Short numbers transport services and other services	1400-1499	Annually	30 000,00
1.3.	Numbers for mobile telephony from 69X and 79X number blocks	XXXXXX	Annually	0,32
1.4.	Numbers for fixed telephony networks, from range 2 and 3	XXXXXX XXXXXXX	Annually Annually	0,32
1.5.	“Free phone” service from 800 block	XXXXXX	Annually	145,00
1.6.	“Premium rate” service from 900 block	XXXXXX		145,00
2. ACCESS CODES				
2.1.	Access codes to telephone networks	1010-1049	Annually	30 000,00
2.2.	Access codes to information services (directory)	1180; 1181	Annually	10 000,00
2.3.	Access codes to information services (directory)	11820-11869	Annually	4 000,00
2.4.	Access codes to information services (directory)	1187-1189	Annually	10 000,00
2.5.	Access codes to IP-telephony services			
2.6.	Access codes to long-distance / international operator services	1600-1640 1680-1699	Annually Annually	5 000,00 5 000,00
2.7.	Technological codes for testing telecommunications networks	1800-1899	Annually	3 000,00
2.8.	Access codes to data transport operators (Internet, Dial-up)	1900-1949	Annually	5 000,00

Numbering resources are allocated in single numbers or blocks. In case one block of numbers or more blocks of numbers are requested, the fees will be multiplied to the number of numbers or blocks of numbers requested.

For “golden” numbers and access codes „1600; 1611; 1616; 1622; 1633”, „1900; 1911; 1919; 1922; 1933; 1944” ratio 3 will be used to the fees established.

Through a separate decision NRATI met the request of applicants for short numbers from range „1” used for motor and other services, that they pay, beginning with February 1, 2004, fees for short numbers allocated by NRATI from the „14XX” number block, twice a year: the first installment, equal to half of the fee established for a number, is to be paid before February 15, and the second installment – before August 15.

7.4. Revenues and Expenses of NRATI

INDICATORS	Year 2004	Year 2003
REVENUES (thousand lei)	7350,9	5198,3
EXPENSES (thousand lei)	6560,6	3992,4

8. Public Relations

The experience gained in the first years of activity and especially the experience of 2004 convinced us that the success of enforcing the regulatory acts issued by NRATI depends mostly on manner in which both telecommunica-

tions and informatics operators and users are notified about them. That is why NRATI focused all its efforts on creation and permanent maintenance of effective ways of communication with the participants to this market.

The main objective of NRATI' communication activity in 2004 was to ensure that operators are kept informed about the new elements of the regulatory framework related to full market liberalization, reception and consideration of all suggestions and proposals from operators regarding draft decisions issued by the regulatory authority

8.1 Communications with Service Operators and Users

Communication between NRATI and telecommunications and informatics service operators and users is conducted based on principles of transparency, advice and public consultation, principles established by the Laws on Telecommunications, on Petitioning and on Access to Information. In order to implement these principles, NRATI, launched its Internet page, available in three languages – Romanian, Russian and English, by means of which the public has access to all relevant information about NRATI activity, and public consultation procedures on Administrative Board Draft Decisions are conducted. These are decisions that have a significant impact on telecommunications and

8.2 Provision of Information of Public Interest

As in previous year, in 2004, NRATI continued to implement the so-called classical formula of transparency: to make public all the information of public interest referring to its activity, to the activity of main market players, as well as to the situation on different segments of the market. All decisions related to license issuance, allocation of numbering resources, tariffs, manner and conditions of basic public telecommunications services provided by JSC MOLDTELECOM, the Reference Interconnection Offer of this operator, etc. are exposed on the NRATI Internet page. As a rule, these decisions become the subject of NRATI press service, which subsequently are made public by mass media at national level.

NRATI Administrative Board Decisions of public interest, information on licenses issued, cancelled or suspended

8.3 Relations with Mass Media

All actions taken by NRATI regarding its relations with mass media are subordinated to a major purpose – by providing objective and fair information – to become a trustworthy partner for the press.

The emphasis in this relationship was placed on continually informing the representatives of the most important media and economic institutions about the new regulations and subsequent transformations as a result of full liberalization of the telecommunications and informatics service market.

In the recent years two traditional practices have become frequent in NRATI activity. It concerns firstly the organization of press conferences dedicated to starting or finalizing full-sized actions in telecommunications and informatics sector,

located on NRATI Web page for public consultation. In all its steps taken throughout the reporting period, NRATI did everything to be open and responsive for discussion and collaboration with all license holders, regardless of their share on the market.

informatics service market. Those interested can find on NRATI Internet page all Administrative Board Decisions, extracts from proceedings of Licensing Commission, press releases, etc. The page also contains information on reception hours of NRATI Administration, on the possibility to contact NRATI officials.

In 2004, during public hearings conducted by NRATI Administration, 320 notifications submitted by citizens were considered. Throughout this period of time, 327 notifications were filed to NRATI. They were examined and solved in strict compliance with the provisions of the Laws on Petitioning and Consumer Protection.

and statistical data about these licenses are published in the Official Monitor of the Republic of Moldova.

It is worth mentioning, that in many cases communication with the public is not restricted to the information, which NRATI makes public in accord with the Law on Access to Information. Any time it is necessary, NRATI staff offer consultations upon request of new telecommunications and informatics service operators, or those who intend to enter the market.

With the view of a better publicity of its activity, NRATI created a special service – the press service that has been active for two years. This service deals not only with the relationship with mass media, but also with the provision of information requested by press representatives and civil public.

whose invitees are representatives of the majority of mass media institutions at national level. Secondly, it concerns making public the press releases dealing with issues of public interest for telecommunications and informatics service providers and users of these services.

In 2004, the officials of NRATI held four press conferences focused on the issues related to tariff rebalancing for basic public telecommunications services provided by JSC MOLDTELECOM, the results of a study on population access to telephony services, launching of the pilot-project of Universal Service implementation in Nisporeni, etc. Throughout this period about one hundred press releases were prepared and made public. Starting with 2004, all press releases are exposed on NRATI Internet page.

Like in the previous period, in 2004, ANRTI promoted the policy of openness in its relationship with the press. Press representatives were invited to all public sessions of NRATI Administrative Board and Licensing Commission, to consultations organized with major telecommunications operators on issues of public interest. In this period of time NRATI met the absolute majority of requests from the press – written and oral – referring to interviews or offering information of public interest.

In 2004, NRATI also organized three press campaigns in connection with several major issues for the country: explanation of Stage II of tariff rebalancing for basic public telecommunications services provided by JSC

MOLDTELECOM and its impact on final users, necessity to harmonize national legislation with the European Union standards and approve a new version of the Law on Telecommunications, to promote the access of population to basic telecommunications and informatics services, and the advantages of implementing Universal Service in the Republic of Moldova. In 2005, the year declared by NRATI Consumers' Year, the emphasis in the relationship with mass media will be placed on continual information of its representatives about the measures NRATI takes for the purpose of promoting and protecting the rights and interests of telecommunications and informatics end/users.

9. Evolution on Telecommunications and Informatics Market

9.1 Market Volume and Structure

In the first year of full liberalization of telecommunications and informatics market, its value, as compared with 2003, grew by almost 21%, reaching 2.4 billion lei. This evolution took place mainly due to the increase of purchasing power, an investment volume growth in different sectors of the industry, due to implementation of new service provision technologies, especially those of broadband Internet Access to, as well as improvement of the quality of provided services.

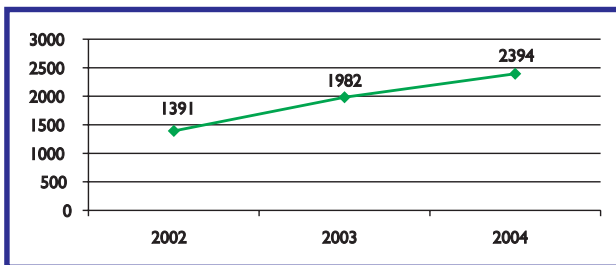


Fig. 9.1 Volume of Telecommunications and Informatics Market of the Republic of Moldova (million lei)

Source: NRATI.

9.2 Investments in Market Sectors

In 2004, the total volume of investments in the telecommunications and informatics market of the Republic of Moldova was equal to approximately 883.3 million lei (70 million \$). The most important investments were made in the fixed telephony sector – 510 million lei. The investments in mobile telephony sector equaled to 330 million lei, for Internet services sector – 24.2 million lei, and for cable and/or air TV services – 19.1 million lei.

From the point of view of structure of telecommunications and informatics market, fixed telephony has the biggest share – 57.69%, followed by mobile telephony – 33.38%, Internet access services – 6.66% and cable and/or air television services – 2.27%.

For 2005, NRATI predicts an increase in the service provision in all market segments, in particular in mobile telephony service provision, which, by the end of current year, could reach the same market share as fixed telephony service provision.

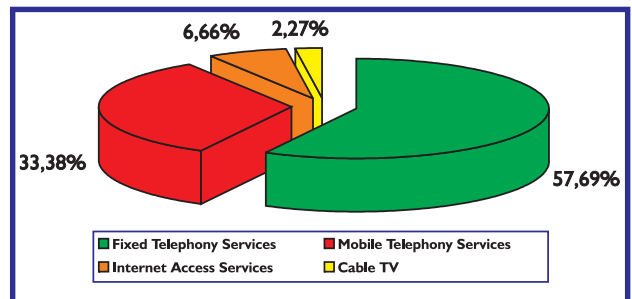


Fig. 9.2 Structure of Telecommunications and Informatics Market of the Republic of Moldova in 2004

Source: NRATI.

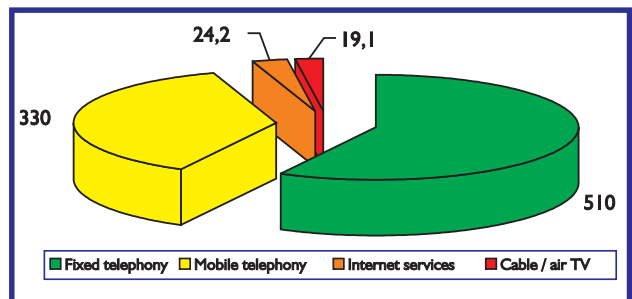


Fig. 9.3 Structure of Investments Made in Telecommunications and Informatics Sector of the Republic of Moldova in 2004 (million lei)

Source: NRATI.

In comparison with 2003, the volume of investments grew by 30.1%. The most evident increase – 163 million lei – was registered in mobile telephony sector. Practically, the investments in this sector doubled, in the other sectors the increase was rather slow, and investments in the fixed telephony sector hardly registered any growth.

The tendency of investments made in 2003-2004 in telecommunications and informatics allow to predict that their volume in 2005 will exceed their level, registered in 2004. NRATI experts consider that this growth will be mainly determined by the investments for the continual development of infrastructure and implementation of new technologies by the national fixed telephony operator JSC MOLDTELECOM, mobile operators JSC VOXTEL and JSC MOLDCELL, for the extension and improvement of Internet access services by means of broadband technologies.

10. Fixed Telephony Sector

10.1 General Overview

The Republic of Moldova is among the few countries in South East Europe, where the fixed telephony sector in the period of 2002 –2004 registered an ascendant evolution. During the reporting period the value of this market equaled to 1 billion 550 million lei, registering a growth of 30 %, as compared with 2003. This growth occurred mostly due to the implementation of the first two stages of tariff rebalancing for basic public services, provided by JSC MOLDTELECOM, application of modern technologies and promotion of new services, increase in the number of subscribers, as well as in the volume of telephony traffic.

In 2004, the total volume of investment in fixed telephony increased, as compared with 2003, by about 58 million lei, reaching 510 million lei. The investments made were focused in expansion of switches capacity and connection of new subscribers; in modernizing, development and installation of switches in district centers, of local switches and networks in rural areas, as well as in digitalization of networks, a factor that contributed to improvement of service quality.

Though in the recent years the process of network digi-

10.2 Operators and Subscribers

As of January 1, 2005, 22 license holders for public fixed telephony service provision were registered with NRATI. In 2004, out of the 22 license holders, JSC MOLDTELECOM, State Railway of Moldova were active on the market, and also partially JSC RISCO, which launched its services in the autumn of 2004. The share of JSC MOLDTELECOM on this market constituted 99.5%. Numbering resources were allocated to the other three holders of the same type of license – ARAX-IMPEX, EUROSTOCK and SICRES PLUS, but they failed to launch their services in 2004.

Throughout the reporting period, there was a tendency of increase in the number of fixed telephony subscribers, especially in rural areas. This tendency is shown in the following diagram:

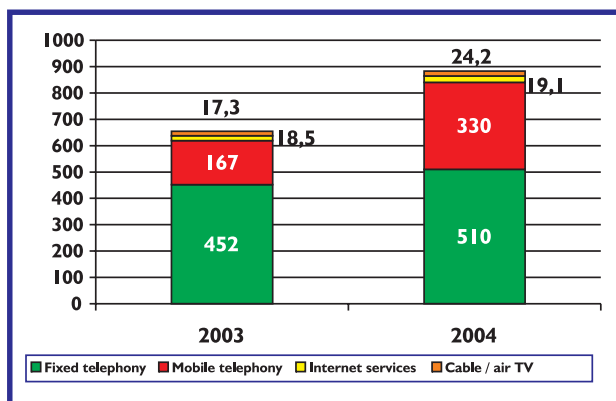


Fig. 9.4 Evolution of Investments in Informatics Sector of the Republic of Moldova, million lei

Source: NRATI.

talization registered a constant growth, the share of analogical connections is still rather high, and the digitalization rate is unsatisfactory in comparison with the digitalization rate in Central Europe and EU countries, where this process was practically finalized.

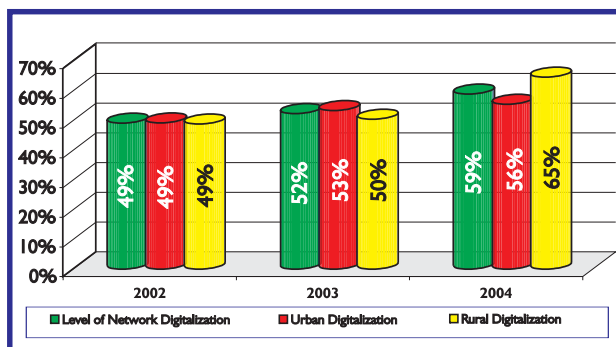


Fig. 10.1 Level of Network Digitalization

Source: NRATI.

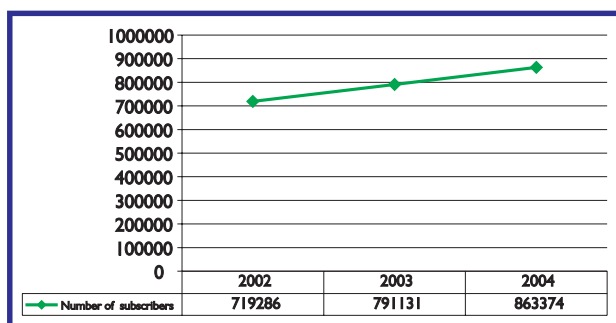


Fig. 10.2 Evolution of Number of Subscribers

Source: NRATI.

10.3 Fixed Telephony Penetration¹

Throughout the 90s, the fixed telephony penetration rate almost doubled and in the timeframe of 2000-2003, this index grew annually by 2% per 100 residents. In 2004, the penetration rate constituted 25.5%, exceeding the level of 25%, which was planned for the end of 2005, according to the Strategy of Telecommunications Sector Development.

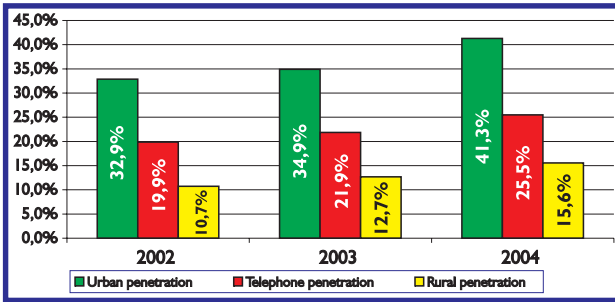


Fig. 10.3 Source: NRATI, according to data reported by operators

Source: NRATI.

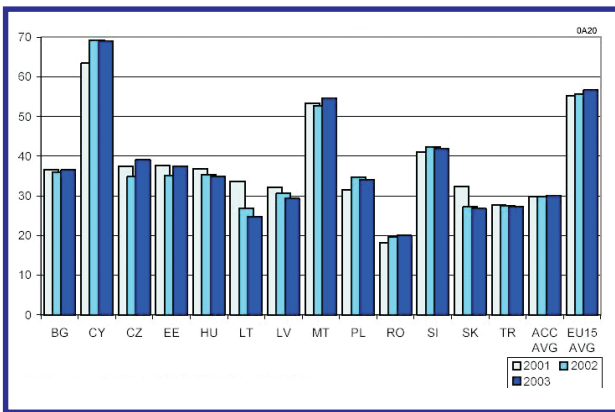


Fig. 10.4 Fixed Telephone Lines per 100 Residents

Source: IBM, EU Project.

The result obtained reduces to a certain extent the discrepancy between the fixed telephony penetration rate in

10.4 Tariffs and Revenues

The first phase of tariff rebalancing for basic public telecommunications services, provided by JSC MOLDTELECOM, started on February 1st 2003, and the second phase – on February 1st, 2004. This process was conditioned by the necessity to open the market for competition and to ensure financial stability of the dominant operator after competitors entered the attractive segments of the market. Before this process started, the revenue generated by local fixed telephony service provision of JSC MOLDTELECOM covered only about 20% of the revenue necessary for providing these services. As a result of the first

Moldova and in EU countries. But, notwithstanding the 3.6% growth (of which 1.6 resulted from the modifications of the estimated number of population, conducted by Statistics and Sociology Department after the population census of 2004), the fixed telephony penetration rate is still one of the lowest as compared with Central Europe and EU countries, which fact allows to affirm that in this sector there is substantial room for development.

In accordance with the provisions of the National Strategy for Creation of Information Society, the Republic of Moldova is to reach the average level of fixed telephony penetration of Central Europe – 35% in the timeframe 2008-2010.

One can judge about fixed telephony penetration from the degree of telephone availability in households, an indicator that shows the share of households that have fixed telephone lines.

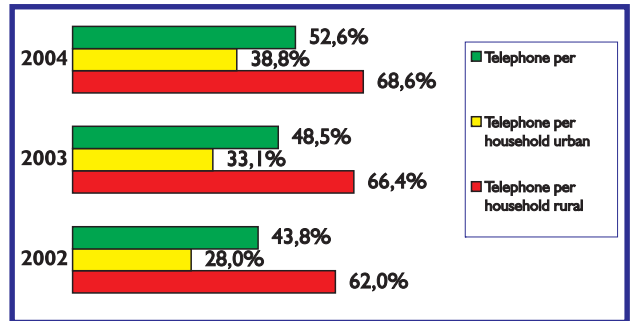


Fig. 10.5 Level of Fixed Telephony Penetration in Households

Source: NRATI.

Though the degree of telephone availability in households is constantly improving, it is still unsatisfactory. Thus, about half of the number of families does not have telephone lines in their households. In urban areas two thirds of families have telephone lines, while in rural localities this index is slightly higher than one third.

two phases of tariff rebalancing, the revenue from local service provision covered about 60% of the necessary revenue.

In 2004, Average Monthly Revenue per User (ARPU) of the incumbent JSC MOLDTELECOM was about 149 lei (by 27% higher than average monthly revenue per user in mobile telephony sector). Throughout the same timeframe, this indicator for company State Railway of Moldova, one of the alternative local fixed telephony operators, made about 17 lei.

The revenue generated from international, long-distance and mobile connections (68%) prevails in the structure of

¹ All the data of Statistics and Sociology Department (www.statistica.md), referring to preliminary number of population of the Republic of Moldova on January 1, 2005, were taken into account for this calculation.

the average revenue per user. Local telephony services generated only 16% of the revenue, and other 7% is generated by new subscribers connection.

Network externalities play a special role in the revenues obtained from the fixed telephony sector. For example, the revenues of JSC MOLDELECOM, generated from the services provided within its own network represented, in 2004, about 33% (49 lei month/subscriber), the rest 67% were obtained due to network externalities. Thus, the activity of mobile telephony operators ensured about 20% of the revenue (30 lei monthly/subscriber) for JSC MOLDELECOM.

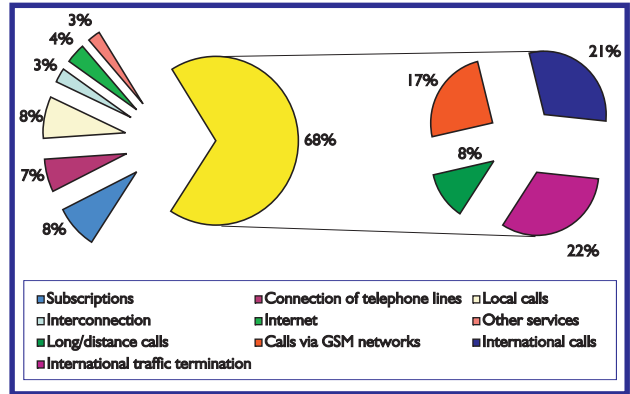


Fig. 10.6 Structure of Average Revenue per User
Source: NRATI.

10.5 Fixed Telephony Traffic

During the reporting timeframe, the biggest part of the traffic was generated by local services. This situation was conditioned, in most part, by low tariffs and significant number of minutes included in the users' monthly subscription.

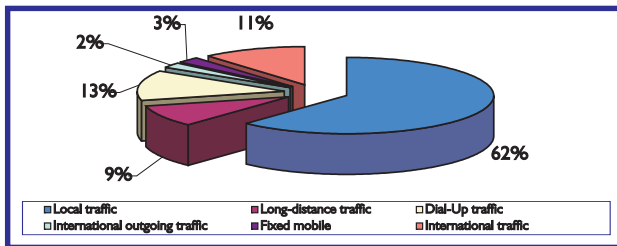


Fig. 10.7 Structure of Total Traffic in Fixed Network of MOLDELECOM in 2004
Source: NRATI.

Though 62% of the traffic fell to the share of local services, it generated only 8% of JSC MOLDELECOM revenues. Unlike local traffic, the international traffic, the share of which was only 11%, generated 43% of the local revenue.

In 2004, a fixed telephony subscriber generated, on average, traffic of the following structure:

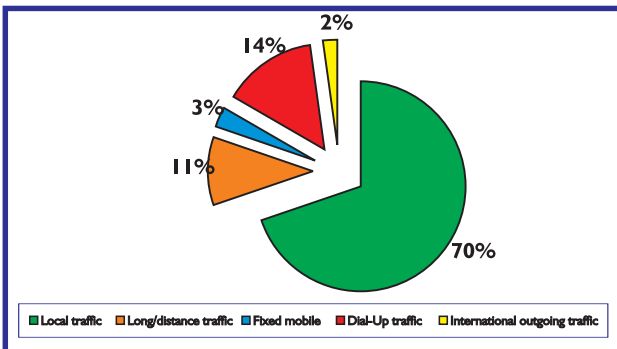


Fig. 10.8 Structure of Traffic Generated by Fixed Network Subscribers
Source: NRATI.

The diagram below shows that, in the recent years, the international traffic of JSC MOLDELECOM registered an essential growth – about 3.5 times, as compared with 2002.

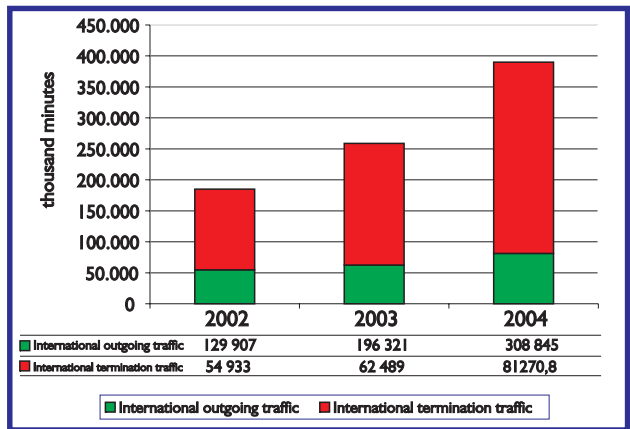


Fig. 10.9 Structure of MOLDELECOM International Traffic
Source: NRATI.

According to the estimations made by NRATI, in 2005 the total number of telephone lines could grow to 930 – 950 thousand, and the fixed telephone penetration rate, per one hundred residents – up to 28 – 29%. NRATI experts explain this forecast by the ascending evolution of the fixed telephony sector in the last two years, by the entry of alternative operators, by application of modern technologies, promotion of more new services, as well as by the increase of JSC MOLDELECOM's revenues, resulted from the growth of the telephone traffic, continuation of the tariff rebalancing process for basic public services provided by this operator.

10.6 International Voice Services via IP (VoIP)

As a result of telecommunications and informatics market liberalization, before January 1st, 2005, 71 companies were authorized to provide international VoIP services, 15 are currently operating – two of them provide IP-telephony services via own networks and 13 – via access networks belonging to other operators.

Table 10.1 The table below lists alternative providers of international IP- telephony services

N/o	Name of provider
1	Arax Impex
2	Boridan Consulting
3	Cartel Sistem
4	Globtelcom
5	Interfon-lux
6	International Communication Systems Inc.
7	Isabel
8	Meganet
9	Moldcell
10	Moldtelecom
11	Sicres Plus
12	Telcom Technologies
13	Telemidia Group
14	Transneogrup
15	Vonessen Group

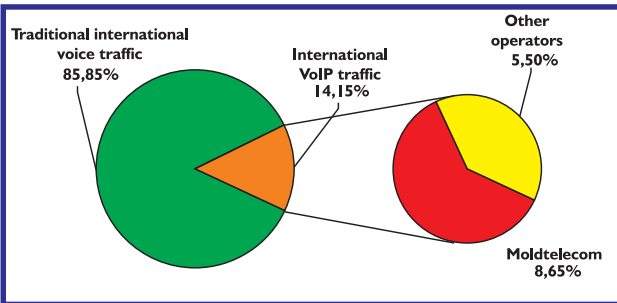


Fig. 10.10 Structure of International Voice Traffic in 2004

Source: NRATI.

Though on the market there are 14 alternative operators that provide international telephony by means of IP

protocol, nevertheless JSC MOLDTELECOM is still the most important provider of these services, its share being equal to 8.65% of the total of 14.15% of international traffic registered in 2004. The share of alternative operators in this figure is equal to 5.50%. The high share of JSC MOLDTELECOM on the segment of international IP-telephony results, in its most part, from vertical integration of this operator. Possessing access and transport infrastructure, and a well-developed payment-collection system, JSC MOLDTELECOM has the possibility to offer post-paid services, which are billed together with other telephony services.

In comparison with 2003, in 2004 the international voice traffic via IP protocol (VoIP) grew by 8.96 million minutes or by 196.3%. But, the traffic of traditional international calls increased by only 27.31% or by 17.6 million minutes.

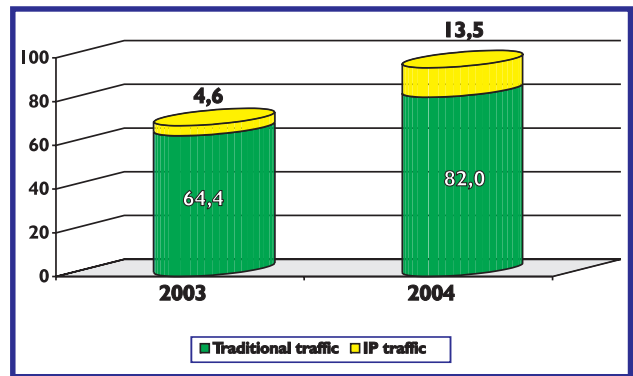


Fig. 10.11 International VoIP Traffic (million minutes)

Source: NRATI.

The growth of international VoIP traffic was caused by a substantial reduction of tariffs for these services, which, depending on direction and network type, are currently by 25-30% lower than those for traditional international telephony. This process was also essentially conditioned by the fact that NRATI reduced, as a result of tariff rebalancing for basic services provided by JSC MOLDTELECOM, the access deficit tariff (from 0.98 lei to 0.50 lei without VAT), which alternative operators have to pay JSC MOLDTELECOM.

11. Mobile Telephony Sector

11.1 General Overview

The cell mobile telephony service was launched in the Republic of Moldova in 1995, when the Ministry of Communications and Informatics issued a license for providing this service, in NMT-450, standard, to company Moldavian Mobile Telephone (MMT).

In 1997, as a result of a repeated international tender, the first GSM cell mobile telephony operator, was desig-

nated: consortium START, comprised of France Telecom Mobile International, Moldavian Mobile Telephone, MOLDTELECOM and MobilRom. Subsequently, the latter registered as joint venture Moldovan-Romanian-French – JSC VOXTEL. During the first 4 years of its activity, the company was supposed to cover 55% of the territory of the country. For the first 2-3 years of activity, the Ministry

of Transport and Informatics estimated a market of as many as 10.000 subscribers.

The second operator, whom the Ministry of Transport and Communications issued a license, in 1999, was the consortium JSC MOLDCELL. The second cell mobile telephony operator started its operational activity in 2000.

In the years 1995-2004 the market of mobile telephony went through two distinct stages. The peculiarity of the first stage was the monopoly of JSC MOLDTELECOM, then – the monopoly of JSC VOXTEL, which fact did not favor

11.2 Subscribers

2004 proved to be the most successful year in the history of mobile telephony in the Republic of Moldova from the point of view of the growth in the number of subscribers. For comparison, in 2000 – 2003 the number of net connections on the market equaled to 110-130 thousand subscribers, while in 2004 both operators connected 317.5 thousand new subscribers. This is, in fact, a 67.6% growth.

Generally, in 2004, the structure of the mobile telephony market, according to the number of subscribers, did not undergo essential changes. The market share of JSC MOLDCELL grew, in 2004, by 3.8%, regaining its positions after JSC VOXTEL increased its market share by 3.1% in 2003.

2004 was the first year when the share of post-paid

11.3 Mobile telephony penetration²

During the timeframe 2000 – 2003, mobile telephony penetration, per one hundred residents, registered a 3% annual growth. In 2004, this growth practically tripled, attaining 8,8%. Thus, the rate of mobile telephony penetration increased in one year from 13.86 to 23.24%. According to the Strategy for telecommunications development, the level of 15% of mobile telephony penetration was to be attained by December 31, 2005.

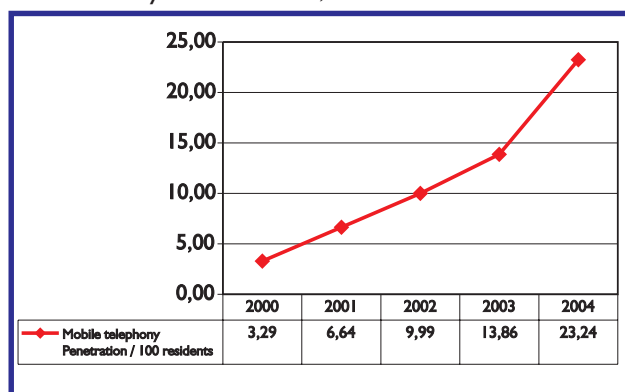


Fig. 11.2 Mobile Telephony Density

Source: NRATI.

rapid market development.

The peculiarity of the second stage was competition between the two mobile telephony operators, which fact substantially enhances market development. Both operators paid and currently pay serious attention to geographical coverage, service quality, as well as to tariff plans convenient for subscribers. The infrastructure, equipment, technologies used, as well as the high professionalism of the staff allow the two operators to provide high quality services.

subscribers registered a slight growth – of 1.4%. It is evident, that pre-paid subscribers continue to be the most numerous group of mobile telephony users, reaching 86.6% of the total number of subscribers.

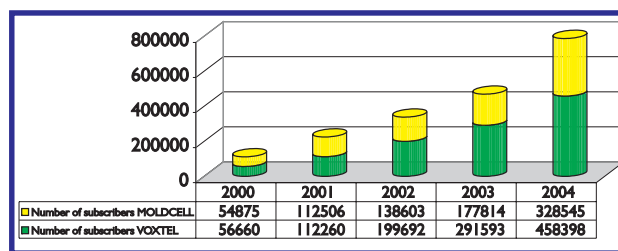


Fig. 11.1 Evolution of Subscriber Base

Source: NRATI.

Acceleration of the growth of mobile telephony penetration rate in the Republic of Moldova reflects the same tendencies as on the similar markets of neighboring states, where acceleration started with a penetration rate of 15-20%, an index that defines the threshold to massive use of mobile telephony.

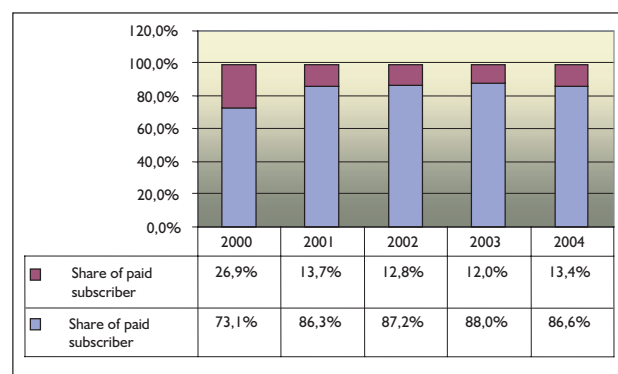


Fig. 11.3 Share of post paid/pre-paid subscribers

Source: NRATI.

² All the data of Statistics and Sociology Department (www.statistica.md), referring to preliminary number of population of the Republic of Moldova on January 1, 2005, were taken into account for this calculation.

11. 4 Revenues and Investments

In 2004, the revenues of the two operators generated from mobile telephony service provision grew from 544 million to 894 million lei or by 64.3%.

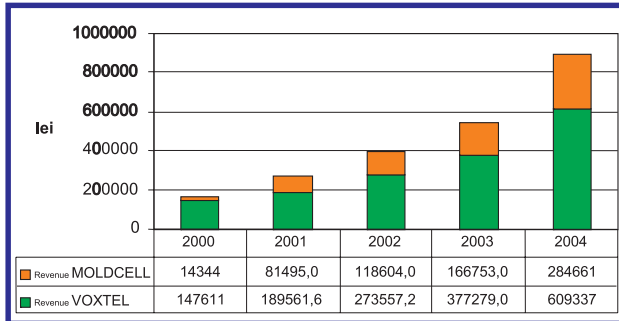


Fig. 11.4 Market Value and Structure

Source: NRATI.

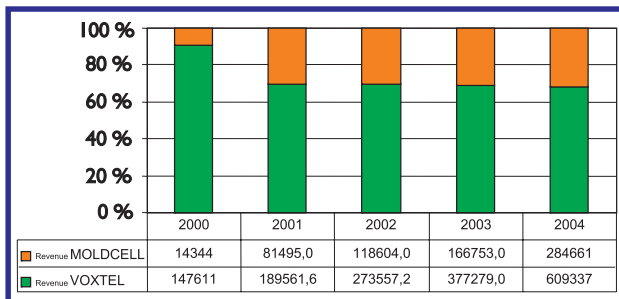


Fig. 11.5 Market Structure according to Revenue, thousand lei

Source: NRATI.

During the reporting timeframe, the Average Revenue per User (ARPU) stabilized, registering a 5% growth in

11. 5 Service Quality

On January 1, 2005, the geographical coverage of both mobile operators equaled to over 86%. According to the data presented, the rates of geographical coverage and population coverage for JSC VOXTEL was equal to 86.16 and 92.37%, and for JSC MOLDCELL, respectively, 86.14% and 87.4%.

The Call Blocking Rate in mobile networks was between 0.07% – 0.4%, and the Call Interruption Rate was about 1.13%.

According to the estimations of NRATI, in 2005 the number of mobile telephony users will continue to grow

comparison with the previous year.

In the period 2000 – 2004 the ARPU for JSC MOLDCELL was relatively stable, registering a slight growth annually, while as far as JSC VOXTEL is concerned, in the period 2000-2003, this indicator was continually decreasing. This phenomenon was caused both by competition and by connection of low-income subscribers to the network.

In 2004, the slight growth of ARPU of both mobile telephony operators occurred under the influence of the rate increase for national and international call termination in mobile networks. In 2005, there will be no increase, so the ARPU could slightly decrease due to recent stabilization of this indicator.

In 2004, the investments made into mobile telephony sector equaled to 330.1 million lei, registering a 96.7% growth as compared to the previous year. JSC VOXTEL invested 171.6 million lei, and JSC MOLDCELL – 158.5 million lei. Investments in this sector make about 40% of the total of investments made in telecommunications.

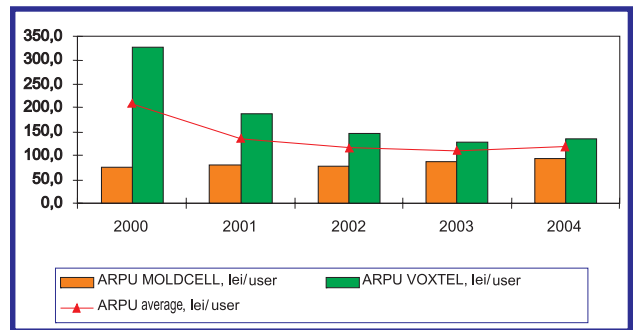


Fig. 11.6 Evolution of Average Revenue Per User

Source: NRATI.

as rapidly as in 2004. By the end of 2005, the total number of subscribers could reach 1.2 million, and the penetration rate – 32-35%. So, in 2005 the level of 30% of mobile telephony penetration will be reached. This level was planned for 2010, according to the Strategy for Telecommunications Development. Unlike 2004, when the growths in the number of subscribers and revenues were practically synchronic, in 2005, as NRATI experts consider, the revenues on the mobile telephony market will register a growth slower than the growth in the subscriber base.

12. Data Transport, Access to Internet and Leased Lines

12.1 General Overview

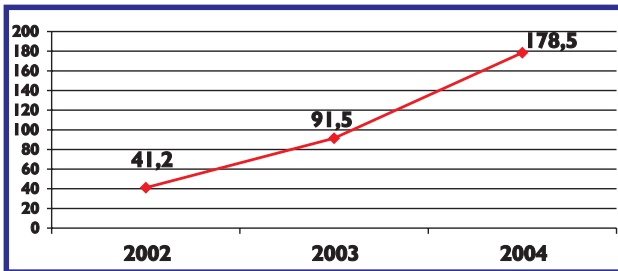


Fig. 12.1 Value of Data Transport and Leased Lines Market (million. lei)

Source: NRATI.

Data transport, access to Internet and leased lines services make up about 6.66% of the telecommunications and informatics market of the Republic of Moldova. In 2004, the value of the market of these services grew by 95% in comparison with 2003. (Figure 12.1.)

NRATI's main objectives on these markets are:

- Identification of wholesale and retail markets by conducting high quality market studies;
- Promotion of broadband services through facilitation of unbundled access of new entrants to the local loop;
- Protection of final users' interests by ensuring accessibility of Internet access services.

12.2 Data Transport and Internet Access Services

On January 1, 2005, 159 companies were registered with NRATI for data transport service provision via terrestrial networks and/or VSAT. The following are the main services provided on the retail market: access to Internet, VoIP, VPN etc. On January 2005 the active providers provided Internet access services, as follows:

- Dial-up Access – 13 providers;
- Access via coaxial cable – 2 providers;
- Radio access – 6 providers;
- XDSL access – 14 providers;
- Access through other means – 5 providers.

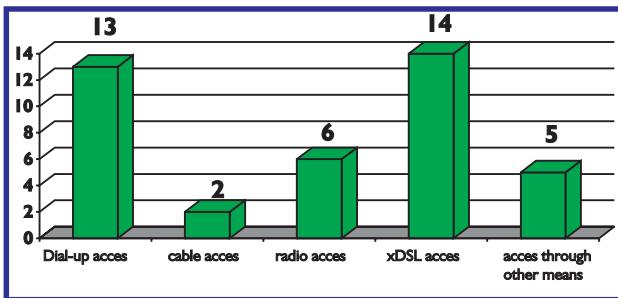


Fig. 12.2 Number of Internet Access Service Providers Depending on Means of Support Used as of December 31, 2004

Source: NRATI.

As compared to 2003, 2004 registered an evident growth in the rate of Internet access service rate in the Republic of Moldova.

Thus, as it is shown in the diagram below, in 2004, the total number of access connections to the Internet grew in comparison with 2003 by 22004 connections. Mainly, this growth took place in WAP connections – by 19291, by coaxial cable – by 738, xDSL connections, especially ADSL, – by 1084, radio connections – by 372, Dial-up connections – by 505, other connections – by 14.

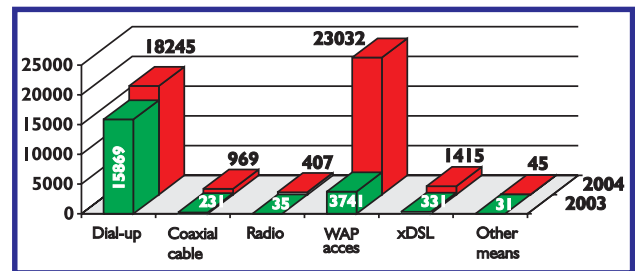


Fig. 12.3 Evolution of Internet Access Connections depending on Means of Support Used

Source: NRATI.

According to a survey, conducted within the project “Elaboration of National Strategy in Informational Society Technologies for Development”, in 2004 the number of Internet users, accessing the Internet regularly (minimum once a week), reached 406 thousand. As compared with 2003, the number of users of this service increased by 118 thousand. The growth was determined, in most part, by appearance of data transport service providers on the market, by the opening of new public Internet access centers, as well as by active connections of pre-university education establishments to the Internet, a process planned according to the presidential program „Salt”.

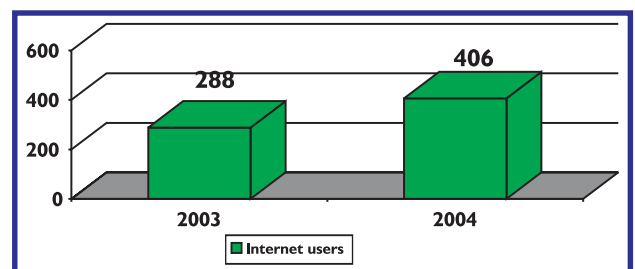


Fig. 12.4 Number of Internet Users (thousand)

Source: Report “Evaluation of E-readiness of Moldova 2004”, UNDP

12.3 Access to Broadband Internet

In 2004, the number of broadband Internet access connections grew by 4.75 times, reaching 2791 connections before January 1, 2005, in comparison with 597 connections registered in 2003. This phenomenon was caused mainly due to the increase in the number of twisted metallic pair connections – by 1084 connections, coaxial cable connections – by 738, radio connections – by 372.

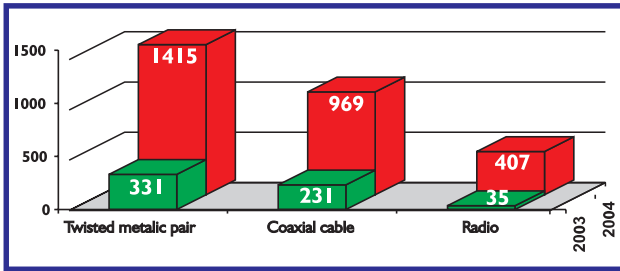


Fig. 12.5 Evolution of Broadband Internet Access Connections depending on Type of Connection

Source: NRATI.

The increase in the number of twisted metallic pair connections occurred due to the development of xDSL broadband technologies, especially ADSL (Asymmetric Digital Subscriber Line). The increase in the number of coaxial cable broadband connections took place due to the facts that the most important cable television operator SUN COMMUNICATIONS launched Internet access services, and

12.4 Access to Narrowband Internet

In 2004, the number of subscribers to Internet Dial Up Access services practically stayed at the same level as in 2003. During this timeframe the growth constituted only 1.7%.

As far as the price is concerned, the tariffs for dial-up access services via twisted metallic pair are still insignificant, keeping to the level of the lowest tariffs registered in the East European and South East European countries.

12.5 Leased Lines

Though in the Republic of Moldova there are 4 providers that use their own access networks for leased line provision, the number of lines they offer is low.

The most important leased line provider is JSC MOLDTELECOM. In the timeframe 2003-2004, the number of leased lines provided by this operator grew from 109 to 593 or by 5.4 times. According to the number of leased lines, the share of JSC MOLDTELECOM on this market was 83.8% in 2003, and 92.9% in 2004.

the number of radio connections increased – due to the implementation of wireless Wi-Fi (Wireless Fidelity) technologies by the company Sarnet.

The share of dedicated broadband connections in the total of dedicated Internet access connections doubled: from 6.5%, in 2003, to 13.2%, in 2004 (Figure 12.6.). Though this growth means a lot for this market segment, it is still very small in comparison with the indicators registered in the countries of Central and South East Europe. This situation is conditioned by the slow development of broadband services: video applications, multimedia services, videoconferences, video upon demand etc.

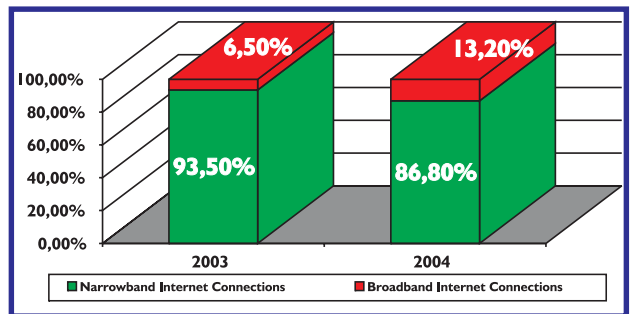


Fig. 12.6 Share of broadband Connections in the total of Internet Connections

Source: NRATI.

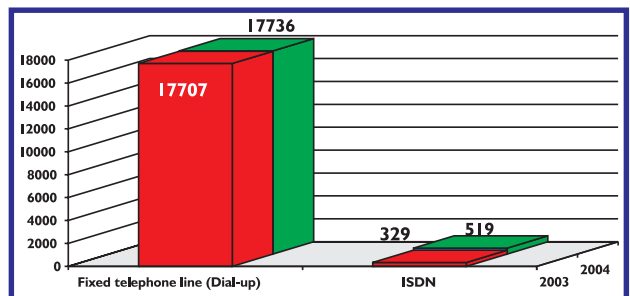


Fig. 12.7 Evolution in the Number of Dial-Up Subscribers depending on Type of Connection

Source: NRATI.

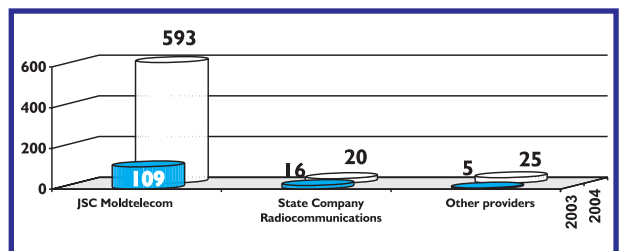


Fig. 12.8 Number of Leased Lines Provided

Source: NRATI.

12. 6 Regulation of Data Transport and Access to Internet

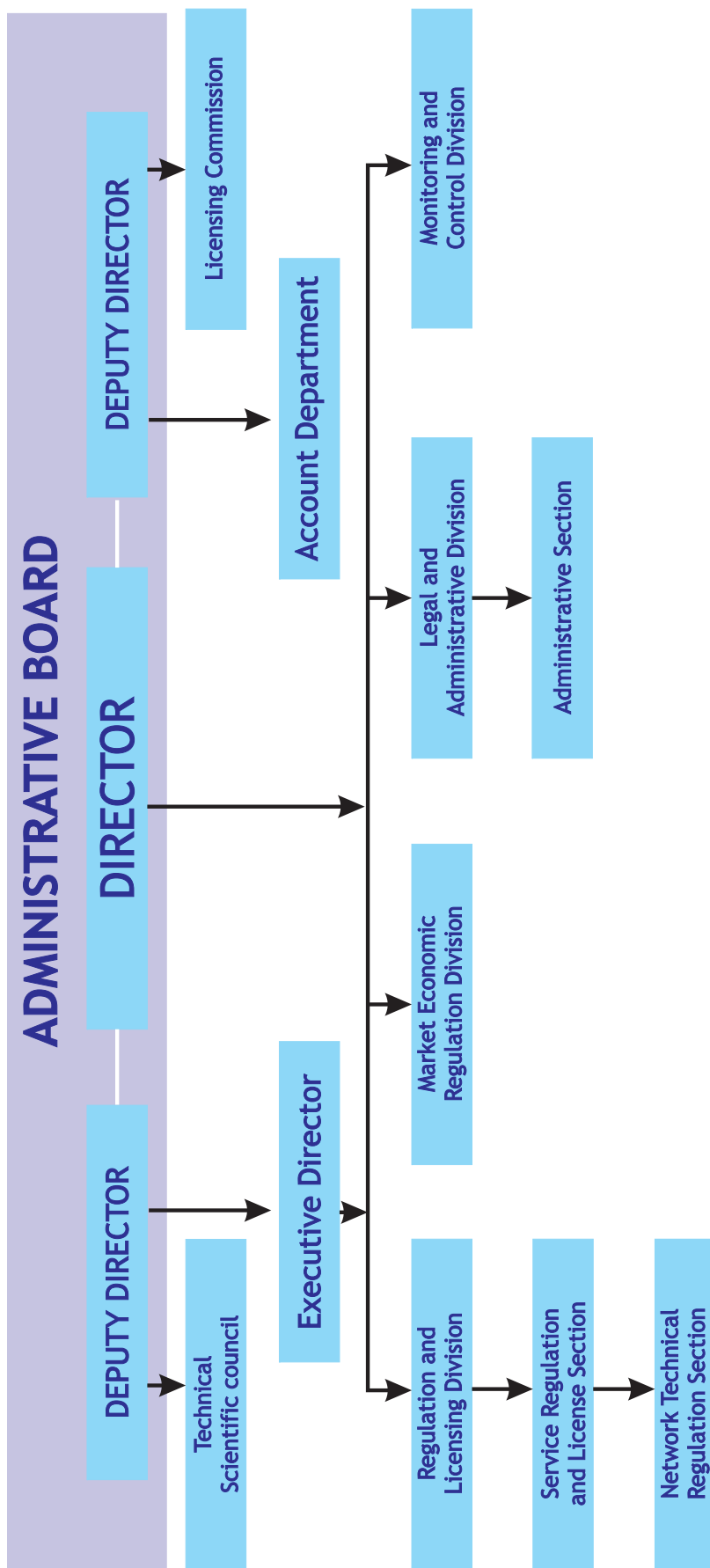
Services of Internet access via dial up (common telephone line) are regulated according to a different regulatory system than telephony services, provided via public fixed telephone network. Thus, through its decision of 31/05/2002 regarding approval of tariffs for public fixed telephone services, provided by JSC MOLDTELECOM, NRATI Administrative Board fixed the tariff 0.032 lei/min for the use of the local fixed telephone network for dial up access to services provided by Internet operators. By means of this decision, NRATI offered alternative Internet service operators the possibility to set their own profit margin.

An important prerequisite for the development of data transport services and stimulation of market entry is facilitation of access to the local loop, made of twisted metallic pair, which belongs to JSC MOLDTELECOM. Before January 1, 2005, Internet access service providers were able to choose only one way of access to the local loop: shared

access, the situation when JSC MOLDTELECOM uses only the low frequency channel (0-4Khz), for fixed telephone service provision, the rest of the frequency channels being used by alternative operators for broadband service provision (by means of xDSL technologies).

In order to regulate access to the local loop, NRATI proposed that JSC MOLDTELECOM elaborate the draft Reference Interconnection Offer for unbundled access to the local loop, made of a twisted metallic pair. The draft will be approved after public consultations are conducted. This document is aimed at allowing new operators to have unbundled access to the local loop of JSC MOLDTELECOM under transparent and non-discriminatory conditions and at cost-based tariffs, in order to be able to provide broadband Internet access services and public local telephone services at fixed locations.

ORGANIGRAM of the National Regulatory Agency in Telecommunications and Informatics



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